



# ***STIC Search Report***

## ***Biotech-Chem Library***

**STIC Database Tracking Number: 163499**

**TO: Shobha Kantamneni**  
**Location: 4c29 / 4b18**  
**Wednesday, August 24, 2005**  
**Art Unit: 1617**  
**Phone: 571-272-2930**  
**Serial Number: 09 / 893861**

**From: Jan Delaval**  
**Location: Biotech-Chem Library**  
**Remsen 1a51**  
**Phone: 571-272-2504**  
  
**jan.delaval@uspto.gov**

### **Search Notes**

=> fil reg

FILE 'REGISTRY' ENTERED AT 08:08:57 ON 24 AUG 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 22 AUG 2005 HIGHEST RN 861291-85-2

DICTIONARY FILE UPDATES: 22 AUG 2005 HIGHEST RN 861291-85-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

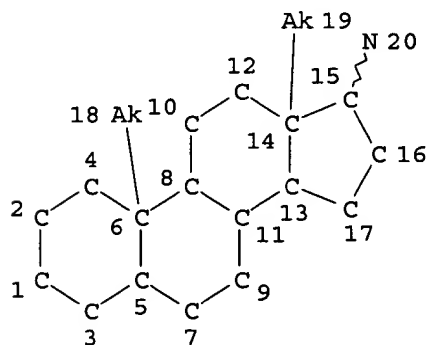
Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d sta que 121

L13

STR



NODE ATTRIBUTES:

CONNECT IS M1 RC AT 1

CONNECT IS M1 RC AT 20

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

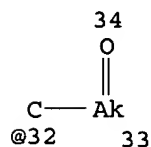
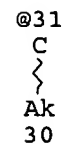
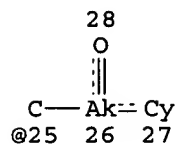
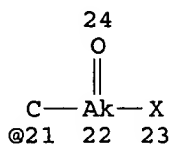
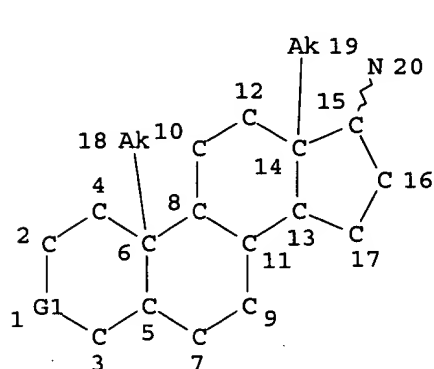
RSPEC 1

NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE

L15 758 SEA FILE=REGISTRY CSS FUL L13

L19 STR



VAR G1=C/32/21/25/31

NODE ATTRIBUTES:

CONNECT IS M1 RC AT 20

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 1

NUMBER OF NODES IS 33

STEREO ATTRIBUTES: NONE

L21 93 SEA FILE=REGISTRY SUB=L15 CSS FUL L19

100.0% PROCESSED 758 ITERATIONS

93 ANSWERS

SEARCH TIME: 00.00.01

=> d his

(FILE 'HCAPLUS' ENTERED AT 07:46:04 ON 24 AUG 2005)

DEL HIS

L1 1 S US20030216361/PN OR (US2001-893861# OR US2000-214844#)/AP,PRN  
E PETTIT G/AU

L2 73 S E3,E9,E10

L3 696 S E14-E16,E21-E24

L4 1 S E26

L5 162 S E112,E118,E135,E136

SEL RN L1

FILE 'REGISTRY' ENTERED AT 07:48:03 ON 24 AUG 2005

L6 5 S E1-E5

L7 1 S L6 AND C5-C6-C6-C6/ES, AND N/ELS

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E C26H42N2O3/MF  
L8 1 S E3 AND C5-C6-C6-C6/ES AND NC4/ES  
L9 1 S 13574-69-1/CRN  
L10 2 S L7-L9  
E 4432.3/RID  
L11 83023 S E4  
L12 29539 S L11 AND N/ELS  
L13 STR  
L14 30 S L13 CSS  
L15 758 S L13 CSS FUL  
SAV L15 KANTAM893/A  
L16 STR L13  
L17 0 S L16 CSS SAM SUB=L15  
L18 0 S L15 AND SQL/FA  
L19 STR L16  
L20 2 S L19 CSS SAM SUB=L15  
L21 93 S L19 CSS FUL SUB=L15  
SAV L21 KANTAM893A/A  
L22 7 S L21 AND C19H33N  
L23 9 S L10,L22  
SAV L23 KANTAM893B/A

FILE 'HCAOLD' ENTERED AT 08:03:20 ON 24 AUG 2005

L24 2 S L23  
SEL AN  
EDIT /AN /OREF

FILE 'HCAPLUS' ENTERED AT 08:04:21 ON 24 AUG 2005

L25 4 S E1-E2  
L26 2 S L25 NOT (METHYLESTRADIOL OR ERGOSTEROL)/TI  
L27 13 S L23  
L28 2 S L26 AND L27  
L29 11 S L27 NOT L28  
L30 3 S L29 AND L1-L5  
L31 12 S L27 AND (PD<=20000628 OR PRD<=20000628 OR AD<=20000628)  
L32 11 S L26-L31 NOT L28  
L33 2 S (3 BETA OR 3BETA OR 3B OR E B) ()ACETOXY() (17BETA OR 17B OR 17  
L34 11 S L32,L33

FILE 'USPATFULL' ENTERED AT 08:08:28 ON 24 AUG 2005

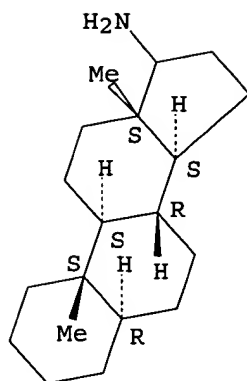
L35 9 S L23

FILE 'REGISTRY' ENTERED AT 08:08:57 ON 24 AUG 2005

=> d ide can tot l23

L23 ANSWER 1 OF 9 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 757123-55-0 REGISTRY  
ED Entered STN: 05 Oct 2004  
CN Androstan-17-amine, (5 $\alpha$ )- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C19 H33 N  
CI COM  
SR CA

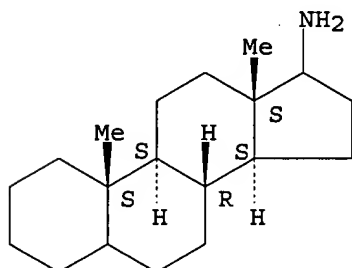
Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L23 ANSWER 2 OF 9 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 496858-17-4 REGISTRY  
 ED Entered STN: 04 Mar 2003  
 CN Androstan-17-amine (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C19 H33 N  
 SR Chemical Library  
 Supplier: Interchim

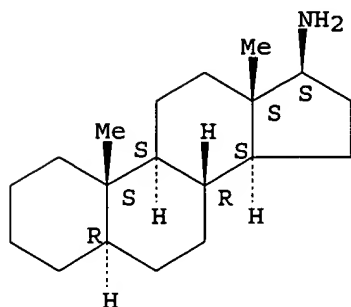
Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L23 ANSWER 3 OF 9 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 54156-37-5 REGISTRY  
 ED Entered STN: 16 Nov 1984  
 CN Androstan-17-amine, hydrochloride, (5α,17β)- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN 17β-Amino-5α-androstane hydrochloride  
 FS STEREOSEARCH  
 MF C19 H33 N . Cl H  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS  
 (\*File contains numerically searchable property data)  
 CRN (31239-17-5)

Absolute stereochemistry.



● HCl

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

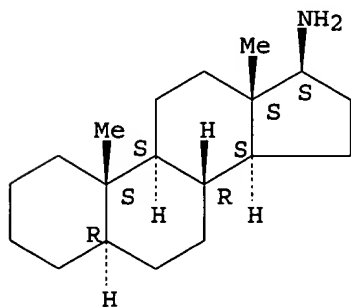
REFERENCE 1: 81:152498

L23 ANSWER 4 OF 9 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 54156-36-4 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )-, acetate (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN 17 $\beta$ -Amino-5 $\alpha$ -androstane acetate  
FS STEREOSEARCH  
MF C19 H33 N . C2 H4 O2  
LC STN Files: CA, CAPLUS

CM 1

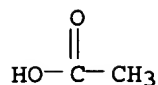
CRN 31239-17-5  
CMF C19 H33 N

Absolute stereochemistry.



CM 2

CRN 64-19-7  
CMF C2 H4 O2

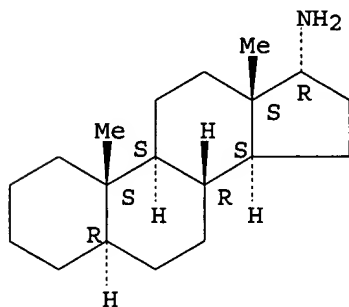


1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 81:152498

L23 ANSWER 5 OF 9 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 31239-23-3 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Androstan-17-amine, (5 $\alpha$ ,17 $\alpha$ ) - (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 5 $\alpha$ -Androstan-17 $\alpha$ -amine (8CI)  
FS STEREOSEARCH  
MF C19 H33 N  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, TOXCENTER  
(\*File contains numerically searchable property data)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

5 REFERENCES IN FILE CA (1907 TO DATE)  
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 81:152498

REFERENCE 2: 75:128415

REFERENCE 3: 74:125901

REFERENCE 4: 74:88205

REFERENCE 5: 56:53616

L23 ANSWER 6 OF 9 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 31239-17-5 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ ) - (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 5 $\alpha$ -Androstan-17 $\beta$ -amine (6CI, 7CI, 8CI)

jan delaval - 24 august 2005

## OTHER NAMES:

CN 17 $\beta$ -Amino-5 $\alpha$ -androstane

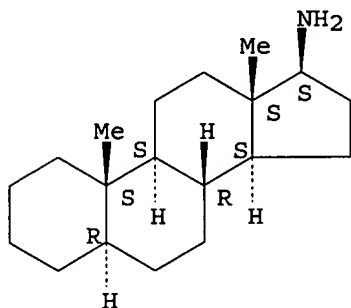
FS STEREOSEARCH

MF C19 H33 N

CI COM

LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT, USPATFULL  
(\*File contains numerically searchable property data)

Absolute stereochemistry.



## \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

8 REFERENCES IN FILE CA (1907 TO DATE)  
 8 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 141:350323

REFERENCE 2: 117:90139

REFERENCE 3: 108:75714

REFERENCE 4: 92:181459

REFERENCE 5: 81:152498

REFERENCE 6: 74:125901

REFERENCE 7: 74:88205

REFERENCE 8: 53:67855

L23 ANSWER 7 OF 9 REGISTRY COPYRIGHT 2005 ACS on STN

RN 13574-72-6 REGISTRY

ED Entered STN: 16 Nov 1984

CN 2-Pyrrolidinecarboxamide, N-(3 $\beta$ -hydroxy-5 $\alpha$ -androstan-17 $\beta$ -yl)-, acetate (ester), monohydrochloride, L- (8CI) (CA INDEX NAME)

## OTHER CA INDEX NAMES:

CN 5- $\alpha$ -Androstan-3 $\beta$ -ol, 17 $\beta$ -(L-2-pyrrolidinecarboxamido)-, acetate (ester), monohydrochloride

FS STEREOSEARCH

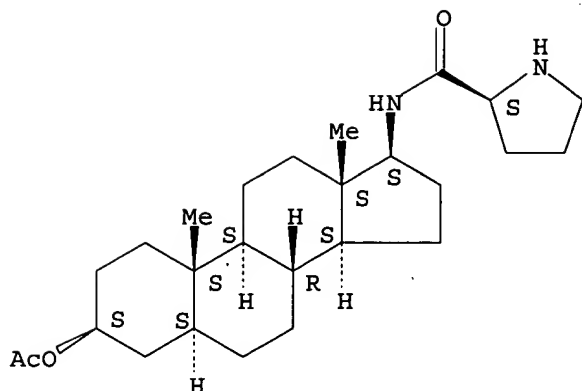
MF C26 H42 N2 O3 . C1 H

LC STN Files: CA, CAPLUS

CRN (13574-69-1)

Absolute stereochemistry.





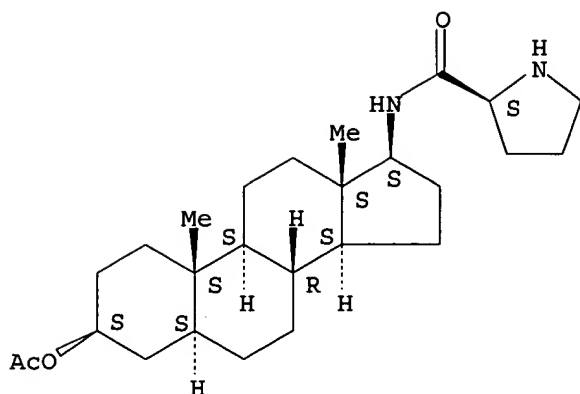
● HCl

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 66:76285

L23 ANSWER 8 OF 9 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 13574-69-1 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN 2-Pyrrolidinecarboxamide, N-[(3β,5α,17β)-3-(acetyloxy)androst-17-yl]-, (2S)-(9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 2-Pyrrolidinecarboxamide, N-(3β-hydroxy-5α-androst-17β-yl)-, acetate (ester), L- (8CI)  
CN 5α-Androst-3β-ol, 17β-(L-2-pyrrolidinecarboxamido)-, acetate (ester)  
FS STEREOSEARCH  
MF C26 H42 N2 O3  
CI COM  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, TOXCENTER, USPATFULL  
(\*File contains numerically searchable property data)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1907 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:374985

REFERENCE 2: 133:203156

REFERENCE 3: 66:76285

L23 ANSWER 9 OF 9 REGISTRY COPYRIGHT 2005 ACS on STN

RN 5953-55-9 REGISTRY

ED Entered STN: 16 Nov 1984

CN Androstan-17-amine, hydrochloride, (5 $\alpha$ )-(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 5 $\alpha$ -Androstan-17 $\beta$ -amine, hydrochloride (7CI, 8CI)

FS STEREOSEARCH

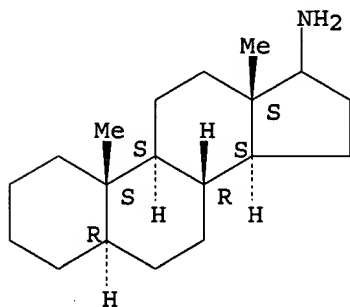
MF C19 H33 N . Cl H

LC STN Files: BEILSTEIN\*, CAOLD

(\*File contains numerically searchable property data)

CRN (757123-55-0)

Absolute stereochemistry.



● HCl

## 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> fil hcaold

FILE 'HCAOLD' ENTERED AT 08:09:14 ON 24 AUG 2005

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PRE-1967 CHEMICAL ABSTRACTS FILE WITH HOUR-BASED PRICING

FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> d all hitstr tot l24

L24 ANSWER 1 OF 2 HCAOLD COPYRIGHT 2005 ACS on STN

AN CA56:10233h CAOLD

TI 17-aminoandrostanes

AU Babcock, John C.

PA Upjohn Co.

DT Patent

PATENT NO.	KIND	DATE
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PI	US 3009925	1961
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DE 1165023
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GB 916138
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IT	1474-16-4	1818-11-7	2354-27-0	2966-91-8	3240-39-9	5668-07-5
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5953-55-9	31239-17-5	54498-44-1	94763-52-7
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94763-58-3	94969-71-8	95135-26-5	95191-12-1	95340-36-6	95367-61-6
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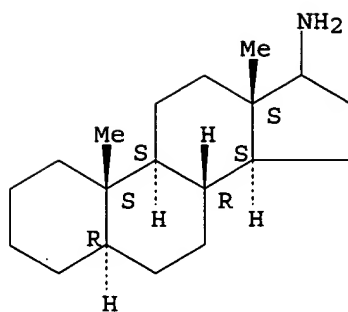
95367-67-2	95462-27-4	95462-28-5	100433-88-3	100468-80-2
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IT	5953-55-9	31239-17-5
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RN	5953-55-9	HCAOLD
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CN	Androstan-17-amine, hydrochloride, (5 $\alpha$ )- (9CI)	(CA INDEX NAME)
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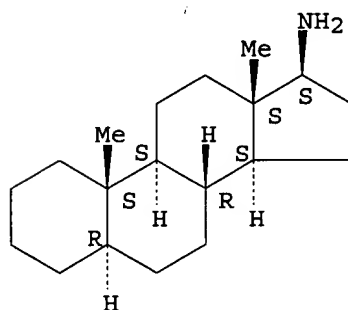
Absolute stereochemistry.



● HCl

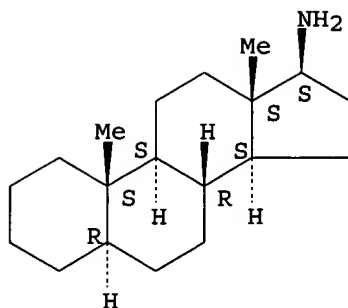
RN 31239-17-5 HCAOLD  
CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 2 OF 2 HCAOLD COPYRIGHT 2005 ACS on STN  
AN CA53:12345b CAOLD  
TI steroids and Walden inversion - (XLI) deamination of A-nor-, B-nor-, and 17-aminosteroids  
AU Shoppee, Charles W.; Sly, J. C. P.  
IT 1178-00-3 2310-36-3 2311-96-8 2493-92-7 4350-66-7 4350-67-8  
6908-01-6 14772-37-3 14772-59-9 20853-64-9 28097-22-5 29599-03-9  
31239-17-5 35878-83-2 56997-89-8 70182-75-1 85198-44-3  
103366-02-5 110346-39-9 119677-75-7 122386-63-4 122386-64-5 122386-65-6  
122386-75-8 122386-76-9 122386-85-0 122386-90-7 122441-37-6 122441-42-3  
122564-84-5 122626-62-4 122650-16-2 122650-17-3 122650-18-4  
IT 31239-17-5  
RN 31239-17-5 HCAOLD  
CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 08:09:29 ON 24 AUG 2005

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FILE COVERS 1907 - 24 Aug 2005 VOL 143 ISS 9

FILE LAST UPDATED: 22 Aug 2005 (20050822/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> => d all tot hitstr 128

L28 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1962:53616 HCAPLUS

DN 56:53616

OREF 56:10233h-i,10234a-g

ED Entered STN: 22 Apr 2001

TI 17-Aminoandrostanes

IN Babcock, John C.

PA Upjohn Co.

DT Patent

LA Unavailable

CC 36 (Steroids)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
√ PI	US 3009925		19611121	US	19591207
	DE 1165023			DE	
	GB 916138			GB	

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PRAI US

19591207

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

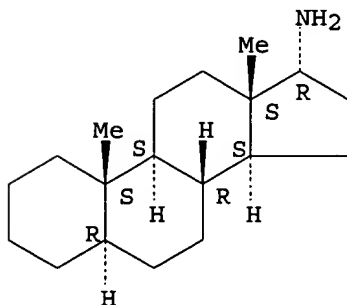
US 3009925 NCL 552/522.000; 424/115.000; 552/516.000; 552/519.000;  
552/577.000; 552/610.000; 552/611.000; 552/641.000

AB 17-Isonitroso-5 $\alpha$ -androstan-11 $\beta$ -ol (20 g.) in 180 ml. iso-PrOH and 180 ml. Et<sub>2</sub>O stirred 3 hrs. with 20 g. Li in 1.5 l. liquid NH<sub>3</sub>, treated with 40 ml. iso-PrOH, evaporated, the residue washed, treated with 40 ml. 2.5N HCl, and crystallized gave 10.2 g. 17 $\beta$ -amino-5 $\alpha$ -androstan-11 $\beta$ -ol-HCl (I), m. 300-4° (decomposition). I (5.55 g.) in 55 ml. 10% aqueous KOH and 200 ml. Et<sub>2</sub>O stirred, separated, evaporated, and crystallized gave 17 $\beta$ -amino-5 $\alpha$ -androstan-11 $\beta$ -ol (II), m. 192-3°. The ether solution of the reduction product remaining after the HCl salt had been precipitated, washed, and evaporated gave 10.55 g. 17 $\alpha$ -amino-5 $\alpha$ -androstan-11 $\beta$ -ol (III), m. 91-100° (decomposition). III treated with dry HCl gave the HCl salt, m. 161.5-5.0° (decomposition). II (6 g.) in 60 ml. C<sub>5</sub>H<sub>5</sub>N left several hrs. with 12 ml. Et chlorocarbonate gave the N-carbethoxy derivative (IV), purified by chromatography. IV oxidized with CrO<sub>3</sub> and AcOH gave 17 $\beta$ -amino-5 $\alpha$ -androstan-11-one N-carbethoxy derivative (V). V hydrolyzed with 10-20% NaOH in (CH<sub>2</sub>OH)<sub>2</sub> gave 17 $\beta$ -amino-5 $\alpha$ -androstan-11-one. II (5.22 g.) in 4.2 ml. HCO<sub>2</sub>H and 3.6 ml. HCHO warmed 1.5 hrs. at 80°, cooled, evaporated, the residue taken up in CH<sub>2</sub>Cl<sub>2</sub>, washed, and evaporated gave 1.8 g. 17 $\beta$ -dimethylamino-5 $\alpha$ -androstan-11 $\beta$ -ol (VI), m. 161.5-3.0° HCl salt prepared via HCl gas. VI (1.86 g.) treated 15 hrs. with 5 ml. MeI gave 1.06 g. 17 $\beta$ -dimethylamino-5 $\alpha$ -androstan-11 $\beta$ -ol-MeI, m. 307-8°. Following this procedure 17 $\beta$ -diethylamino-5 $\alpha$ -androstan-11 $\beta$ -ol was prepared by use of AcH. The HCl and MeI salts were prepared 9 $\alpha$ -Fluoro-17-isonitroso-5 $\alpha$ -androstan-11 $\beta$ -ol (VII) was prepared from 9(11)-androsten-17-one by reaction with N-bromoacetamide in aqueous HClO<sub>4</sub> and the 9 $\alpha$ -bromo-11 $\beta$ -hydroxy-5 $\alpha$ -androstan-17-one so formed treated with KOAc in alc. gave first 9 $\beta$ ,11 $\beta$ -oxido-5 $\alpha$ -androstan-17-one, which with anhydrous HF gave 9 $\alpha$ -fluoro-11 $\beta$ -hydroxyandrostan-17-one (VIII). VIII oxidized with CrO<sub>3</sub> in AcOH gave 9 $\alpha$ -fluoroandrostan-11,17-dione (IX). VIII and IX were converted with NH<sub>2</sub>OH.HCl in C<sub>5</sub>H<sub>5</sub>N to VII and 9 $\beta$ -fluoro-17-isonitroso-5 $\alpha$ -androstan-11-one, resp. These two compds. reduced catalytically gave 17 $\beta$ -amino-9 $\alpha$ -fluoro-5 $\alpha$ -androstan-11 $\beta$ -ol (X) and 17 $\beta$ -amino-9 $\alpha$ -fluoro-5 $\alpha$ -androstan-11-one, resp. X was converted into 17 $\beta$ -dimethylamino-9 $\alpha$ -fluoro-5 $\alpha$ -androstan-11 $\beta$ -ol, HCl salt, and MeI salt. II (6 g.) in 60 ml. C<sub>5</sub>H<sub>5</sub>N left 2 hrs. with 12 ml. ClCO<sub>2</sub>Et gave the amorphous urethan, purified by chromatography on Florisil. This urethan in 200 ml. tetrahydrofuran refluxed 15 hrs. with 6 g. LiAlH<sub>4</sub> in the same solvent, decomposed, treated with 12 ml. 20% KOH and 12 ml. H<sub>2</sub>O, filtered, and the filtrate evaporated gave HCl salt of 17 $\beta$ -methylamino-5 $\alpha$ -androstan-11 $\beta$ -ol, m 307-10° (MeOH-2.5N HCl). II (5.3 g.) in 4.6 ml. HCO<sub>2</sub>H and 4 ml. HCHO warmed 1 hr. with effervescence, then refluxed 1.5 hrs., evaporated, the residue taken up in Et<sub>2</sub>O and CH<sub>2</sub>Cl<sub>2</sub>, and the product recrystd. gave 2.7 g. 17 $\beta$ -dimethylamino-5 $\alpha$ -androstan-11 $\beta$ -ol (XI), m. 87-98.5°; HCl salt m. 281-2°. II with ClCO<sub>2</sub>Et gave 17 $\beta$ -amino-5 $\alpha$ -androstan-11 $\beta$ -ol N-carbethoxy derivative and this product reduced with LiAlH<sub>4</sub> gave 17 $\beta$ -methylamino-5 $\alpha$ -androstan-11 $\beta$ -ol. The sulfates and phosphates of the above compds. were readily prepared XI (0.7 g.) in 25 ml. alc. and 5 ml. MeI left 18 hrs. and poured into Et<sub>2</sub>O gave 17 $\beta$ -dimethylamino-5 $\alpha$ -androstan-11 $\beta$ -ol-MeI, m. 281.5-3.5° (decomposition). 17-Isonitroso-9(11)-androsten-17-one was converted to

17 $\beta$ -amino-9(11)-androstene-HCl and then into 17 $\beta$ -amino-9(11)-androstene. X afforded 17 $\beta$ -methylamino-9 $\alpha$ -fluoro-5 $\alpha$ -androstane-11 $\beta$ -ol. 17-Isonitroso-5 $\alpha$ -androstane-11 $\alpha$ -ol gave 17-amino-5 $\alpha$ -androstane-11 $\alpha$ -ol-HCl. Typical compns. embodying the above compds. for pharmacol. use were described.

- IT Fungicides or Fungistats  
(5 $\alpha$ -androstane-17 $\beta$ -amine and derivs. as)
- IT Androgenic hormones or principles  
(inhibitors, 2-methylestra-1,3,5(10)-triene-3,17 $\beta$ -diol as)
- IT 5 $\alpha$ -Androstane-11 $\alpha$ -ol, 17 $\beta$ -amino-  
5 $\alpha$ -Androstane-11 $\alpha$ -ol, 17 $\beta$ -amino-, hydrochloride  
5 $\alpha$ -Androstane-11 $\beta$ -ol, 17 $\alpha$ -amino-, hydrochloride  
5 $\alpha$ -Androstane-11 $\beta$ -ol, 17 $\beta$ -(dimethylamino)-, methiodide  
5 $\alpha$ -Androstane-17 $\alpha$ -amine, hydrochloride  
5 $\alpha$ -Androstane-17 $\alpha$ -amine, N,N-dimethyl-  
5 $\alpha$ -Androstane-17 $\alpha$ -amine, N,N-dimethyl-, hydrochloride  
5 $\alpha$ -Androstane-17 $\alpha$ -amine, N,N-dimethyl-, methiodide  
5 $\alpha$ -Androstane-17 $\alpha$ -amine, N-methyl-, hydrochloride  
Ammonium, (11 $\beta$ -hydroxy-5 $\alpha$ -androstane-17 $\beta$ -yl)trimethyl,  
iodide  
Ammonium, (5 $\alpha$ -androstane-17 $\beta$ -yl)trimethyl, iodide
- IT 438-22-2, Androstane  
(11,18-dioxygenated derivs.)
- IT 1474-16-4, 5 $\alpha$ -Androstane-11 $\beta$ -ol, 17 $\beta$ -amino-, hydrochloride  
2354-27-0, 5 $\alpha$ -Androstane-11 $\beta$ -ol, 17 $\beta$ -amino-9-fluoro-  
2966-91-8, 5 $\alpha$ -Androstane-11 $\beta$ -ol, 17 $\beta$ -amino-9-fluoro-,  
hydrochloride 5668-07-5, 5 $\alpha$ -Androstane-11 $\beta$ -ol, 17 $\beta$ -amino-  
31239-23-3, 5 $\alpha$ -Androstane-17 $\alpha$ -amine 61148-15-0,  
5 $\alpha$ -Androstane-11 $\beta$ -ol, 17 $\alpha$ -amino- 94763-58-3,  
5 $\alpha$ -Androstane-11 $\beta$ -ol, 17 $\beta$ -(methylamino)- 94969-71-8,  
5 $\alpha$ -Androst-9(11)-en-17 $\beta$ -amine, N,N-dimethyl- 95135-26-5,  
5 $\beta$ -Androstane-11 $\beta$ -ol, 17 $\beta$ -(dimethylamino)-, hydrochloride  
95340-36-6, 5 $\beta$ -Androstane-11 $\beta$ -ol, 17 $\beta$ -(dimethylamino)-  
95367-61-6, 5 $\alpha$ -Androst-9(11)-en-17 $\beta$ -amine, hydrochloride  
95367-67-2, 5 $\alpha$ -Androstane-11-one, 17 $\beta$ -amino-, hydrochloride  
95462-27-4, 5 $\alpha$ -Androst-9(11)-en-17 $\beta$ -amine 95462-28-5,  
5 $\alpha$ -Androstane-11-one, 17 $\beta$ -amino-  
(preparation of)
- IT 31239-23-3, 5 $\alpha$ -Androstane-17 $\alpha$ -amine  
(preparation of)
- RN 31239-23-3 HCAPLUS
- CN Androstane-17-amine, (5 $\alpha$ ,17 $\alpha$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



AN 1959:67855 HCAPLUS  
 DN 53:67855  
 OREF 53:12345b-1,12346a-h  
 ED Entered STN: 22 Apr 2001  
 TI Steroids and Walden inversion. XLI. Deamination of some A-nor-, B-nor-, and 17-aminosteroids  
 AU Shoppee, C. W.; Sly, J. C. P.  
 CS Univ. Coll., Swansea, S. E. Wales  
 SO Journal of the Chemical Society, Abstracts (1959) 345-56  
 CODEN: JCSAAZ; ISSN: 0590-9791  
 DT Journal  
 LA Unavailable  
 CC 10J (Organic Chemistry: Steroids)  
 OS CASREACT 53:67855  
 AB cf. C.A. 53, 1412g. NH<sub>2</sub> groups attached to flexible 5-membered carbocyclic systems, e.g., cyclopentane, cis-perhydroindan, appear to possess mixed equatorial-axial character. NH<sub>2</sub> groups attached to rigid 5-membered carbocyclic systems, e.g. trans-perhydroindan, or to such systems forming part of the nuclei of A-nor-5 $\alpha$ -, A-nor-5 $\beta$ - and 14 $\alpha$ -steroids, at positions adjacent to a bridgehead, appear to possess either equatorial character disclosed by deamination with retention of configuration, or axial character disclosed by deamination with ready and exclusive elimination (Saytzev orientation); nor steroids with NH<sub>2</sub> groups not adjacent to a bridgehead, like aliphatic amino groups, undergo deamination with predominant inversion of configuration accompanied by some elimination. Cholesterol (11 g.) oxidized 2.5 hrs. at 70-5° with 11.5 g. CrO<sub>3</sub> in 90% AcOH gave 8.5 g. 2,3-seco-5 $\alpha$ -cholestane-2,3-dioic acid, m. 196-7° (Et<sub>2</sub>O-pentane), which when refluxed with Ac<sub>2</sub>O and distilled at 300°/1.5 mm. gave 4.6 g. A-nor-5 $\alpha$ -cholestan-2-one (I), m. 100-1° (MeOH); oxime m. 201-3° (EtOAc). I by reduction with excess Na in alc., or with (iso-PrO)<sub>3</sub>Al in slowly distilling (7 hrs.) PrOH gave a mixture of epimeric alcs., which were separated by overnight treatment with 4% alc. solution of digitonin. The insol. digitonide on decomposition with C<sub>5</sub>H<sub>5</sub>N gave A-nor-5 $\alpha$ -cholestan-2 $\alpha$ -ol (II), m. 128°, [ $\alpha$ ]<sub>D</sub> 38° (c 1.2, all rotations determined in CHCl<sub>3</sub>); acetate, m. 80°, [ $\alpha$ ]<sub>D</sub> 1° (c 0.8). The material not precipitated by digitonin gave A-nor-5 $\alpha$ -cholestan-2 $\beta$ -ol (III), as solvate, m. 120° with transition to needles m. 135°, and after sublimation at 160°/0.5 mm., m. 153°, [ $\alpha$ ]<sub>D</sub> 28° (c 1.0); acetate m. 93°, [ $\alpha$ ]<sub>D</sub> 25° (c 0.4). I oxime (0.6 g.) refluxed 2 hrs. in 200 cc. AmOH saturated with Na, left 1.5 hrs., and excess Na destroyed with alc. gave 580 mg. of oil which was chromatographed on Al<sub>2</sub>O<sub>3</sub> to give 430 mg. 2 $\beta$ -amino-A-nor-5 $\alpha$ -cholestane (IV), b<sub>0.01</sub> 150°, [ $\alpha$ ]<sub>D</sub> 25.5° (c 0.9); acetyl derivative m. 190-1° (Me<sub>2</sub>CO), [ $\alpha$ ]<sub>D</sub> 39° (c 1.0). I oxime (0.5 g.) hydrogenated 6 hrs. with 200 mg. PtO<sub>2</sub> in 50 cc. AcOH, the product acetylated, and chromatographed on Al<sub>2</sub>O<sub>3</sub> gave 410 mg. IV N-Ac derivative 3,4-Seco-5-cholestene-3,4-dioic acid (m. 296°) was converted by refluxing with Ac<sub>2</sub>O and pyrolyzing at 300-20°/ 1.5 mm. into A-nor-5 $\beta$ -cholesten-3-one (V), m. 95°. Hydrogenation of V with PdO in Et<sub>2</sub>O-AcOH gave A-nor-5 $\beta$ -cholestan-3-one (VI), m. 74°; oxime m. 129-30°, [ $\alpha$ ]<sub>D</sub> 74° (c 0.9). VI (250 mg.) in refluxing alc. treated 2 hrs. with Na, isolated, and chromatographed on Al<sub>2</sub>O<sub>3</sub> gave 200 mg. A-nor-5 $\beta$ -cholestan-3 $\beta$ -ol (VII), m. 89° and 107°, [ $\alpha$ ]<sub>D</sub> 51° (c 0.9). VI (85 mg.) refluxed 1 hr. with 50 mg. LiAlH<sub>4</sub> in Et<sub>2</sub>O gave 85 mg. of an oil which when chromatographed gave 69 mg. VII. VI (100 mg.) resisted hydrogenation in the presence of 44 mg. PtO<sub>2</sub> in Et<sub>2</sub>O-AcOH containing 2 drops 60% HClO<sub>4</sub> and was



recovered unchanged (97 mg.). V oxime (0.6 g.) refluxed 3 hrs. in 120 cc. AmOH saturated with Na, left 1 hr., excess Na destroyed, and the mixture poured into H<sub>2</sub>O, extracted with Et<sub>2</sub>O, and worked up through the Et<sub>2</sub>O-insol. HCl salt gave 400 mg. 3 $\beta$ -amino-A-nor-5 $\beta$ -cholestane (VIII), b<sub>0.5</sub> 181-5°, [ $\alpha$ ]<sub>D</sub> 46° (c 0.8); Ac derivative m. 246-7°, [ $\alpha$ ]<sub>D</sub> 48° (c 0.9). V oxime (250 mg.) reduced 0.75 hr. in 35 cc. AcOH with 100 mg. PtO<sub>2</sub> and H gave 220 mg. of an oil which when chromatographed on Al<sub>2</sub>O<sub>3</sub> gave 3 $\alpha$ -amino-A-nor-5 $\beta$ -cholestane (IX), m. 66-8° (MeOH), [ $\alpha$ ]<sub>D</sub> 9° (c 1.1); Ac derivative m. 166-8°, [ $\alpha$ ]<sub>D</sub> 67° (c 0.9). 3 $\beta$ -Hydroxy-6,7-seco-5 $\alpha$ -cholestane-6,7-dioic acid, m. 239°, was oxidized with CrO<sub>3</sub> in AcOH to the 3-oxo acid, m. 254-5°. The 3-oxo acid (8.3 g.) refluxed 1 hr. with 215 cc. (CH<sub>2</sub>OH)<sub>2</sub> containing 7 cc. N<sub>2</sub>H<sub>4</sub>.H<sub>2</sub>O with 8.3 g. Na, the temperature allowed to rise to 185° and refluxing continued 6 hrs. gave 7.3 g. 6,7-seco-5 $\alpha$ -cholestane-6,7-dioic acid (X), m. 272-3° (AcOH). The Ba salt of X by pyrolysis 3 hrs. at 400-20°/1.5 mm. gave B-nor-5 $\beta$ ,8 $\alpha$ -cholestan-6-one (XI), m. 92-3° (aqueous Me<sub>2</sub>CO); oxime m. 185-7° (MeOH). XI (200 mg.) refluxed 1.5 hrs. in 80 cc. AmOH with Na and the crude product chromatographed gave 144 mg. B-nor-5 $\beta$ ,8 $\alpha$ -cholestan-6 $\alpha$ -ol (XII), m. 85-7° (aqueous Me<sub>2</sub>CO), [ $\alpha$ ]<sub>D</sub> 42° (c 1.0). XI (300 mg.) refluxed 14 hrs. with excess LiAlH<sub>4</sub> and the 290 mg. of crude product chromatographed on Al<sub>2</sub>O<sub>3</sub> gave 145 mg. unchanged XI and 120 mg. XII. XII left overnight with SOCl<sub>2</sub> in C<sub>5</sub>H<sub>5</sub>N gave B-nor-8 $\alpha$ -cholest-5-ene, an oil. XI oxime (215 mg.) refluxed 4 hrs. with Na and AmOH gave after chromatography 6 $\alpha$ -amino-B-nor-5 $\beta$ ,8 $\alpha$ -cholestane (XIII), b<sub>1</sub> 220-30°, [ $\alpha$ ]<sub>D</sub> 33° (c 1.1); Ac derivative, b<sub>0.4</sub> 180-90°, m. 178-80° (Me<sub>2</sub>CO), [ $\alpha$ ]<sub>D</sub> 14° (c 1.1). XI oxime (110 mg.) in 30 cc. dioxane refluxed 16 hrs. with excess LiAlH<sub>4</sub> and the crude product acetylated and chromatographed gave XIII Ac derivative XI oxime (120 mg. resisted hydrogenation in 30 cc. AcOH with 50 mg. PtO<sub>2</sub> at 20° and at 55-60° with 4 drops 60% HClO<sub>4</sub>. 5 $\alpha$ -Androstan-17-one oxime (XIV) (1 g.) similarly treated with Na in alc. gave 17 $\beta$ -amino-5 $\alpha$ -androstan-17-one (XV), m. 138-41° (Me<sub>2</sub>CO); Ac derivative m. 208-9° (EtOAc). XIV (0.5 g.) in 100 cc. Et<sub>2</sub>O refluxed 3 hrs. with 1 g. LiAlH<sub>4</sub> gave 480 mg. XV. XIV (0.4 g.) hydrogenated 1 hr. with 50 cc. AcOH, 100 mg. PtO<sub>2</sub>, and 2 drops 60% HClO<sub>4</sub> gave 380 mg. XV. 3 $\beta$ -Acetoxy-5-androsten-17-one oxime (XVI) (1.5 g.) similarly reduced with 100 cc. alc. and Na gave 1.3 g. 17 $\beta$ -amino-5-androsten-3 $\beta$ -ol (XVII), m. 160° (EtOAc), [ $\alpha$ ]<sub>D</sub> -80° (c 1.0); N,O-di-Ac derivative m. 196°, [ $\alpha$ ]<sub>D</sub> -88° (c 0.5). XVI (0.5 g.) in 50 cc. Et<sub>2</sub>O refluxed 3 hrs. with excess LiAlH<sub>4</sub> gave 450 mg. XVII. 3 $\beta$ -Acetoxy-5-etienic acid (0.5 g.) in 20 cc. C<sub>6</sub>H<sub>6</sub> refluxed 2 hrs. with 1 cc. purified SOCl<sub>2</sub>, the chloride in 60 cc. 2:1 Me<sub>2</sub>CO-dioxane treated 0.5 hr. with 300 mg. NaN<sub>3</sub> in 1.2 cc. H<sub>2</sub>O, and this material heated 1.5 hrs. in C<sub>6</sub>H<sub>6</sub> gave the 17 $\beta$ -isocyanate, which was refluxed 2 hrs. with 20 cc. AcOH and 7 cc. concentrated HCl, evaporated, and the product refluxed 1 hr. with 15% MeOHNaOH, and the base isolated through the Et<sub>2</sub>O-insol. HCl salt and chromatographed to give 175 mg. XVII. In the following 6 expts. the steroid amine was dissolved in 50% AcOH and where necessary dioxane added to give full solution NaNO<sub>2</sub> (2-3 times the weight of amine) in 50% AcOH was added dropwise at 20°, the mixture left overnight, after basification with 4N NaOH, and the product isolated by extraction with Et<sub>2</sub>O, and then hydrolysis 0.5 hr. with 5% MeOH-KOH, or acetylation at 100°. (1) IV (205 mg.) gave a product which by chromatography on Al<sub>2</sub>O<sub>3</sub> gave 5 mg. of an oil which did not crystallize, but gave a pos. test for unsatn. with C(NO<sub>2</sub>)<sub>4</sub> in CHCl<sub>3</sub>, and is probably A-nor-5 $\alpha$ -cholest-1(and/or -2)-ene, 125 mg. of II, and 60 mg. of an oil which by acetylation gave IV Ac derivative (2) VIII (0.6

g.) gave a product from which most of the basic material was separated by treatment with dry HCl in Et<sub>2</sub>O. The Et<sub>2</sub>O-insol. HCl salt (290 mg.) gave on acetylation VIII Ac derivative. The 315 mg. of residue by chromatography gave: (a) 177 mg. A-norcholest-3(5)-ene (XVIII), m. 80°, [ $\alpha$ ]<sub>D</sub> 53° (c 1.1); (b) 119 mg. VII; and (c) 14 mg. of oil, which on acetylation gave VII Ac derivative (3) IX (210 mg.) gave 195 mg. of crude product which on chromatography gave (a) 82 mg. XVIII, and (b) 105 mg. oils which on acetylation gave IX Ac derivative (4) XIII (300 mg.) gave 280 mg. crude product which on chromatography gave (a) 50 mg. B-nor-8 $\alpha$ -cholest-5-ene, noncryst. but gave a pos. C(NO<sub>2</sub>)<sub>4</sub> test; (b) 146 mg. of a substance, C<sub>26</sub>H<sub>46</sub>ON<sub>2</sub>, m. 121° and 136-8°, and (c) 75 mg. of oil which on acetylation gave XIII Ac derivative (5) XV (130 mg.) gave 125 mg. 5 $\alpha$ -androstan-17 $\beta$ -ol, m. 168-70° (hexane). (6) XVII (0.5 g.) gave 485 mg. androst-5-ene-3 $\beta$ ,17 $\beta$ -diol, m. 177-80° (EtOAc). Complete absence of elimination products. in the deamination of 17 $\beta$ -amino steroids may reflect the presence of the angular Me group on the adjacent bridgehead C atom and suggests that a diazonium ion, rather than a carbonium ion, is the important intermediate.

## IT Steroids

(Walden inversion and)

## IT Walden inversion

(in steroids)

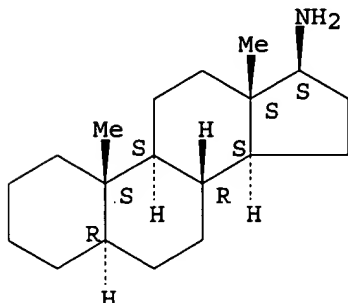
## IT Deamination

(of A-nor-, B-nor- and 17-aminosteroids)

- IT 521-17-5, Androst-5-ene-3 $\beta$ ,17 $\beta$ -diol 1178-00-3,  
 1H-Benz[e]indene-6,7-diacetic acid, 3-(1,5-dimethylhexyl)dodecahydro-3a,6-dimethyl- 1178-00-3, 2,3-Seco-5 $\alpha$ -cholestane-2,3-dioic acid  
 2310-36-3, A-Nor-5 $\alpha$ -cholestan-2-one 2311-96-8,  
 A-Nor-5 $\alpha$ -cholestan-2 $\alpha$ -ol 2493-92-7, A-Nor-5 $\alpha$ -cholestan-2 $\alpha$ -ol, acetate 4350-66-7, Androst-5-en-3 $\beta$ -ol, 17 $\beta$ -amino-4350-67-8, Androst-5-en-3 $\beta$ -ol, 17 $\beta$ -acetamido-, acetate 6908-01-6, A-Nor-5 $\beta$ -cholestan-3-one 14772-37-3,  
 A-Nor-5 $\alpha$ -cholestan-2 $\beta$ -ol 14772-59-9, A-Nor-5 $\alpha$ -cholestan-2 $\beta$ -ol, acetate 20853-64-9, 5 $\alpha$ -Androstane, 17 $\beta$ -acetamido-28097-22-5, 4-Indancarboxylic acid, 5-(2-carboxy-1-methyl-4-oxocyclohexyl)-1-(1,5-dimethylhexyl)hexahydro-7a-methyl- 29599-03-9, 4-Indancarboxylic acid, 5-(2-carboxy-1-methylcyclohexyl)-1-(1,5-dimethylhexyl)hexahydro-7a-methyl- 31239-17-5, 5 $\alpha$ -Androstan-17 $\beta$ -amine  
 35878-83-2, A-Norcholest-3(5)-ene 56997-89-8, A-Norcholest-5-en-3-one 70182-75-1, A-Nor-5 $\alpha$ -cholestan-2-one, oxime 85198-44-3,  
 A-Nor-5 $\beta$ -cholestan-3 $\beta$ -ol 103366-02-5, B-Nor-5 $\beta$ ,8 $\alpha$ -cholestan-6-one 110346-39-9, 6,7-Seco-5 $\alpha$ -cholestane-6,7-dioic acid, 3-oxo- 119677-75-7, B-Nor-8 $\alpha$ -cholest-5-ene 122386-63-4,  
 A-Nor-5 $\alpha$ -cholestan-2 $\beta$ -ol, 2 $\beta$ -acetamido- 122386-64-5,  
 A-Nor-5 $\beta$ -cholestan-3 $\alpha$ -acetamido- 122386-65-6,  
 A-Nor-5 $\beta$ -cholestan-3 $\beta$ -acetamido- 122386-75-8,  
 A-Nor-5 $\alpha$ -cholest-1-ene 122386-76-9, A-Nor-5 $\alpha$ -cholest-2-ene 122386-85-0, B-Nor-5 $\beta$ ,8 $\alpha$ -cholestan-6-one, oxime 122441-37-6,  
 A-Nor-5 $\beta$ -cholestan-3-one, oxime 122441-42-3, B-Nor-5 $\beta$ ,8 $\alpha$ -cholestan-6 $\alpha$ -ol 122564-84-5, 6,7-Seco-5 $\alpha$ -cholestane-6,7-dioic acid 122626-62-4, B-Nor-5 $\beta$ ,8 $\alpha$ -cholestan-6 $\alpha$ -amine 122650-16-2, A-Nor-5 $\alpha$ -cholestan-2 $\beta$ -amine 122650-17-3,  
 A-Nor-5 $\beta$ -cholestan-3 $\alpha$ -amine 122650-18-4, A-Nor-5 $\beta$ -cholestan-3 $\beta$ -amine  
 (preparation of)  
 IT 217-04-9, Dicyclopenta[a,f]naphthalene 240-05-1, Cyclopenta[a]fluorene (steroid derivs.)  
 IT 31239-17-5, 5 $\alpha$ -Androstan-17 $\beta$ -amine (preparation of)

RN 31239-17-5 HCAPLUS  
 CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> d all tot hitstr 134

L34 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:541472 HCAPLUS  
 DN 141:350323  
 ED Entered STN: 07 Jul 2004  
 TI Conversion of Epiandrosterone Into 17 $\beta$ -Amino-5 $\alpha$ -androstane  
 AU Merlani, M. I.; Davitishvili, M. G.; Nadaraia, N. Sh.; Sikharulidze, M. I.; Papadopoulos, K.  
 CS I. G. Kutateladze Institute of Pharmaceutical Chemistry, Academy of Sciences of Georgia, Tbilisi, 0159, Russia  
 SO Chemistry of Natural Compounds (Translation of Khimiya Prirodnykh Soedinenii) (2004), 40(2), 144-146  
 CODEN: CHNCA8; ISSN: 0009-3130  
 PB Kluwer Academic/Consultants Bureau  
 DT Journal  
 LA English  
 CC 32-4 (Steroids)  
 AB A new method for synthesizing 17 $\beta$ -amino-5 $\alpha$ -androstane was developed based on tigogenin. The configuration at C-17 was proved by PMR.  
 ST amino androstane prepn  
 IT Steroids, preparation  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (amino; preparation of 17 $\beta$ -amino-5 $\alpha$ -androstane from epiandrosterone)  
 IT Amines, preparation  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (steroidal; preparation of 17 $\beta$ -amino-5 $\alpha$ -androstane from epiandrosterone)  
 IT 481-29-8, Epiandrosterone  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of 17 $\beta$ -amino-5 $\alpha$ -androstane from epiandrosterone)  
 IT 963-75-7P 6020-90-2P 10429-07-9P 774604-56-7P 774604-57-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of 17 $\beta$ -amino-5 $\alpha$ -androstane from epiandrosterone)  
 IT 31239-17-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of 17 $\beta$ -amino-5 $\alpha$ -androstane from epiandrosterone)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Babcock, J; US 2863885 1958 HCAPLUS
- (2) Babcock, J; US 3009925 1961 HCAPLUS
- (3) Campbell, T; Brit J Pharmacol 1982, V76, P337 HCAPLUS
- (4) Choppe, C; J Chem Soc 1959, P345
- (5) Kemertelidze, E; Khim-Farm Zh 1972, V6(12), P44 HCAPLUS
- (6) Kruizinga, W; J Org Chem 1981, V46, P4321 HCAPLUS
- (7) Lucas, R; J Am Chem Soc 1960, V82(21), P5688
- (8) Marker, R; J Am Chem Soc 1936, V58, P480 HCAPLUS
- (9) Nadaraia, N; Zh Org Khim 1987, V23(3), P533 HCAPLUS
- (10) Takasuto, S; Chem Pharm Bull 1989, V23(12), P1431

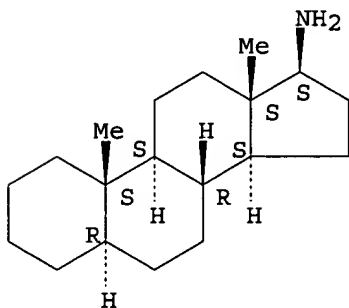
IT 31239-17-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of 17 $\beta$ -amino-5 $\alpha$ -androsterone from epiandrosterone)

RN 31239-17-5 HCAPLUS

CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:912849 HCAPLUS

DN 139:374985

ED Entered STN: 21 Nov 2003

TI Therapeutic compositions using androstane amides effective against  
Gram-positive bacteria

IN Pettit, George R.; Pettit, Robin K.

PA USA

SO U.S. Pat. Appl. Publ., 12 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM A61K031-56

ICS A61K031-58

INCL 514176000; 514182000

CC 1-5 (Pharmacology)

Section cross-reference(s): 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003216361	A1	20031120	US 2001-893861	20010628 <--
PRAI	US 2000-214844P	P	20000628	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003216361	ICM	A61K031-56

ICS A61K031-58  
 INCL 514176000; 514182000  
 US 2003216361 NCL 514/176.000  
 ECLA A61K031/56; A61K031/58 <--

OS MARPAT 139:374985

AB The invention discloses androstane amide compds., especially 3.  
**beta.-acetoxy-17 $\beta$  - (L-prolyl)amino-5 $\alpha$  - androstane.** The compds. are useful as antimicrobial agents, most specifically against Gram- pos. bacteria. The invention further discloses pharmaceutical compns. and methods of treating bacterial infection using such compns.

ST androstane amide deriv antibacterial Gram pos bacteria; prolyl androstane deriv antibacterial Gram pos bacteria

IT Antibacterial agents  
 Antibiotic resistance  
 Arcanobacterium haemolyticum  
 Bacillus cereus  
 Bacillus circulans  
 Bacillus licheniformis  
 Bacillus subtilis  
 Bactericide resistance  
 Candida albicans  
 Corynebacterium diphtheriae  
 Corynebacterium hoagii  
 Cryptococcus neoformans  
 Drug delivery systems  
 Enterobacter cloacae  
 Enterococcus  
 Enterococcus faecalis  
 Enterococcus faecium  
 Escherichia coli  
 Firmicutes  
 Gardnerella vaginalis  
 Gordonia bronchialis  
 Gordonia sputi  
 Klebsiella pneumoniae  
 Lactobacillus  
 Listeria monocytogenes  
 Micrococcus luteus  
 Neisseria gonorrhoeae  
 Nocardia asteroides  
 Nocardia farcinica  
 Paenibacillus alvei  
 Proteus vulgaris  
 Pseudomonas aeruginosa  
 Rhodococcus  
 Rhodococcus equi  
 Staphylococcus aureus  
 Staphylococcus epidermidis  
 Staphylococcus saprophyticus  
 Stenotrophomonas maltophilia  
 Streptococcus group A  
 Streptococcus pneumoniae  
 (androstane amides effective against Gram-pos. bacteria)

IT Antimicrobial agents  
 (androstane amides effective against Gram-pos. bacteria, and use with other antimicrobial agents)

IT Infection  
 (bacterial; androstane amides effective against Gram-pos. bacteria)

IT Medical goods  
(dressings, surface-adhering; androstane amides effective against Gram-pos. bacteria)

IT Drug delivery systems  
(emulsions; androstane amides effective against Gram-pos. bacteria)

IT Drug delivery systems  
(lotions; androstane amides effective against Gram-pos. bacteria)

IT Drug delivery systems  
(oily; androstane amides effective against Gram-pos. bacteria)

IT Drug delivery systems  
(ointments, creams; androstane amides effective against Gram-pos. bacteria)

IT Drug delivery systems  
(ointments; androstane amides effective against Gram-pos. bacteria)

IT Drug delivery systems  
(salves; androstane amides effective against Gram-pos. bacteria)

IT Mutation  
(spontaneous mutants; androstane amides effective against Gram-pos. bacteria)

IT Drug delivery systems  
(topical; androstane amides effective against Gram-pos. bacteria)

IT 438-22-2D, Androstane, derivs. 13574-69-1  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(androstane amides effective against Gram-pos. bacteria)

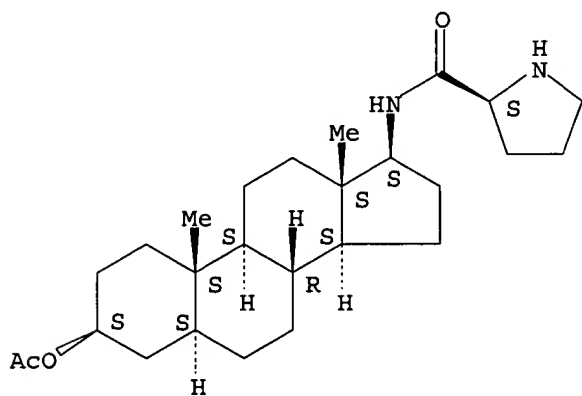
IT 61-32-5, Methicillin 1404-90-6, Vancomycin 1406-05-9, Penicillin  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(resistance to; androstane amides effective against Gram-pos. bacteria)

IT 13574-69-1  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(androstane amides effective against Gram-pos. bacteria)

RN 13574-69-1 HCAPLUS

CN 2-Pyrrolidinecarboxamide, N-[(3 $\beta$ ,5 $\alpha$ ,17 $\beta$ )-3-(acetyloxy)androstan-17-yl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2000:526375 HCAPLUS  
DN 133:203156  
ED Entered STN: 02 Aug 2000  
TI Antimicrobial and cancer cell growth inhibitory activities of 3.

**beta.-acetoxy-17 $\beta$  - (L-prolyl)amino-5 $\alpha$  - androstane** in vitro  
 AU Pettit, R. K.; Cage, G. D.; Pettit, G. R.; Liebman, J. A.  
 CS Cancer Research Institute, Departments of Microbiology and Chemistry, Arizona State University, Tempe, AZ, 85287-1604, USA  
 SO International Journal of Antimicrobial Agents (2000), 15(4), 299-304  
 CODEN: IAAGEA; ISSN: 0924-8579  
 PB Elsevier Science Ireland Ltd.  
 DT Journal  
 LA English  
 CC 2-4 (Mammalian Hormones)  
 AB The in vitro activity of the steroidal amide 3 $\beta$  - **acetoxy-17 $\beta$  - (L-prolyl)amino-5 $\alpha$  -androstane** against 179 Gram-pos. clin. isolates was examined. The min. bactericidal concentration (MBC)/MIC ratios were  $\leq 2$  for 73% of methicillin-resistant *Staphylococcus aureus*, 59% of vancomycin-resistant *Enterococcus* spp. and 88% of penicillin-resistant *Streptococcus pneumoniae*. The androstane derivative was bactericidal for a variety of other Gram-pos. genera, including *Nocardia*, *Corynebacterium* and *Listeria*. Variation in MICs in pH 6-8 media was slight. The frequency of occurrence of bacterial spontaneous mutations to resistance ranged from 10<sup>-6</sup> to 10<sup>-9</sup>. Kill curve analysis confirmed the bactericidal nature of the steroidal amide, and demonstrated that killing was time dependent but not concentration dependent for all organisms. The ability of 3 $\beta$  -**acetoxy-17 $\beta$  - (L-prolyl)amino-5 $\alpha$  -androstane** to inhibit human cancer cell growth was also evaluated. The concentration required to inhibit 50% of cell growth (GI50) was  $< 2.5$  mg/l for all cell lines examined. In single-dose murine toxicity evaluations, the androstane derivative was non-toxic at doses up to 400 mg/kg.  
 ST androstane amide antimicrobial antitumor cancer cell proliferation inhibition toxicity  
 IT Antimicrobial agents  
 Antitumor agents  
*Corynebacterium*  
*Enterococcus faecalis*  
*Listeria*  
*Nocardia*  
 Ovary, neoplasm  
 Pancreas, neoplasm  
 Proliferation inhibition  
*Rhodococcus*  
*Staphylococcus aureus*  
*Streptococcus pneumoniae*  
 (3 $\beta$  -**acetoxy-17 $\beta$  - (L-prolyl)amino-5 $\alpha$  -androstane** in vitro antimicrobial and cancer cell growth inhibition activity and in vivo murine toxicity)  
 IT Nervous system  
 (central, neoplasm; 3 $\beta$  -**acetoxy-17 $\beta$  - (L-prolyl)amino-5 $\alpha$  -androstane** in vitro antimicrobial and cancer cell growth inhibition activity and in vivo murine toxicity)  
 IT Intestine, neoplasm  
 (colon; 3 $\beta$  -**acetoxy-17 $\beta$  - (L-prolyl)amino-5 $\alpha$  -androstane**

$\alpha$  -**androstane** in vitro antimicrobial and cancer  
 cell growth inhibition activity and in vivo murine toxicity)

IT Leukemia  
 (lymphocytic; 3 $\beta$  -**acetoxy**-17  
 $\beta$  - (L-**prolyl**)**amino**-5  
 $\alpha$  -**androstane** in vitro antimicrobial and cancer  
 cell growth inhibition activity and in vivo murine toxicity)

IT Prostate gland  
 (neoplasm; 3 $\beta$  -**acetoxy**-17  
 $\beta$  - (L-**prolyl**)**amino**-5  
 $\alpha$  -**androstane** in vitro antimicrobial and cancer  
 cell growth inhibition activity and in vivo murine toxicity)

IT Lung, neoplasm  
 (non-small-cell carcinoma; 3 $\beta$  -**acetoxy**-  
 -17 $\beta$  - (L-**prolyl**)**amino**-  
 5 $\alpha$  -**androstane** in vitro antimicrobial  
 and cancer cell growth inhibition activity and in vivo murine toxicity)

IT 13574-69-1  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
 (Uses)  
 (3 $\beta$  -**acetoxy**-17  
 $\beta$  - (L-**prolyl**)**amino**-5  
 $\alpha$  -**androstane** in vitro antimicrobial and cancer  
 cell growth inhibition activity and in vivo murine toxicity)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Amyes, S; J Med Microbiol 1997, V46, P436 HCAPLUS

(2) Anon; Dictionary of Antibiotics and Related Substances 1988

(3) Koll, B; Clin Infect Dis 1993, V17(Suppl 2), PS322

(4) Monks, A; J Natl Cancer Inst 1991, V83, P757 HCAPLUS

(5) National Committee for Clinical Laboratory Standards; Approved Standard  
 M2-A6 1997

(6) National Committee for Clinical Laboratory Standards; Approved standard  
 M7-A4 1997

(7) Pettit, G; J Med Chem 1967, V10, P145 HCAPLUS

(8) Pfaller, M; Antimicrob Agents Chemother 1998, V42, P1762 HCAPLUS

IT 13574-69-1  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
 (Uses)  
 (3 $\beta$  -**acetoxy**-17  
 $\beta$  - (L-**prolyl**)**amino**-5  
 $\alpha$  -**androstane** in vitro antimicrobial and cancer  
 cell growth inhibition activity and in vivo murine toxicity)

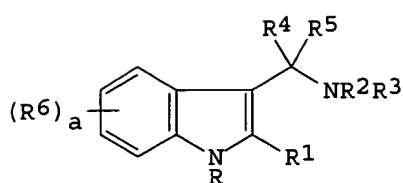
RN 13574-69-1 HCAPLUS

CN 2-Pyrrolidinecarboxamide, N-[(3 $\beta$ ,5 $\alpha$ ,17 $\beta$ )-3-  
 (acetyloxy)androstan-17-yl]-, (2S)- (9CI) (CA INDEX NAME)

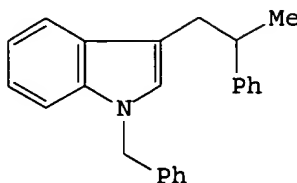
Absolute stereochemistry.







I



II

- AB Title compds. [I; R = alkyl, alkenyl, alkynyl, R1CO, (substituted) Ph, PhCH2, PhSO2, carbamoyl, aminoalkyl, etc.; R1 = H, alkyl, alkenyl, alkynyl, (substituted) Ph, PhCH2; R2 = (substituted) PhCH2, furylmethyl, thienylmethyl, pyridylmethyl, pyrrolylmethyl, indolylmethyl, benzofurylmethyl, imidazolylmethyl, etc.; R3 = H, (substituted) PhCH2; R4 = H, CH2OH; R5 = H, alkyl, hydroxyalkyl; R6 = H, halo, OH, OR8, SR8, NO2, amino, O2CR1, COR1, CF3, R7R8NSO2, SR8, cyano, R5O2C, alkyl, etc.; R7 = H, alkyl; R8 = H, alkyl, alkenyl, alkynyl, (substituted) Ph, PhCH2, cycloalkyl, cycloalkylmethyl, etc.], also useful as antihyperglycemics (no data) were prepared. Thus, (S)- $\alpha$ -methylbenzylamine, 1-benzyl-1H-indole-3-carboxaldehyde (preparation given), and NaBH3CN were stirred 48 h in MeOH/HOAc to give (S)-II.
- ST indolemethanamine prepn antidiabetic; antiobesity agent indolemethanamine; antihyperlipidemic indolemethanamine
- IT Antidiabetics and Hypoglycemics  
Antiobesity agents  
(indolemethanamines)
- IT Arteriosclerosis  
(atherosclerosis, treatment of, indolemethanamines for)
- IT 31239-17-5, 17-Aminoandrostane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(amination by, of indolecarboxaldehyde derivative)
- IT 64-04-0, 2-Phenylethylamine 64715-80-6 64715-85-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation of, with indolecarboxaldehyde derivative)
- IT 2740-83-2, 3-Trifluoromethylbenzylamine  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation of, with indolecarboxaldehyde derivative, in preparation of antidiabetic, antiobesity, and antiatherosclerotic agent)
- IT 35019-66-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(condensation of, with methylindolecarboxaldehyde)
- IT 50-99-7, D-Glucose, biological studies  
RL: BIOL (Biological study)  
(impaired tolerance to, treatment of, indolemethanamines for)
- IT 9004-10-8, Insulin, biological studies  
RL: BIOL (Biological study)  
(insensitivity to, treatment of, indolemethanamines for)
- IT 95-87-4, 2,5-Dimethylphenol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(nitration of, in preparation of antidiabetic, antiobesity, and antiatherosclerotic agent)
- IT 142769-46-8P 142769-47-9P 142769-48-0P 142769-49-1P 142769-50-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and cyanoborohydride reduction of, in preparation of antidiabetic, antiobesity, and antiatherosclerotic agent)
- IT 62492-45-9P 63762-72-1P 142769-25-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reaction of, in preparation of antidiabetic, antiobesity, and antiatherosclerotic agents)

IT 59382-36-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reductive amination of indolecarboxaldehyde derivative by, as intermediate for antidiabetic, antiobesity, and antiatherosclerotic agents)

IT 10511-51-0P, 1-Benzylindole-3-carboxaldehyde  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reductive amination of, in preparation of antidiabetic, antiobesity, and antiatherosclerotic agents)

IT 142769-44-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reductive amination of, in preparation of intermediate for antidiabetic, antiobesity, and antiatherosclerotic agents)

IT 56026-56-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and salification of, in preparation of antidiabetic, antiobesity, and antiatherosclerotic agents)

IT 142768-86-3P 142768-87-4P 142768-88-5P 142768-89-6P 142768-90-9P  
142768-91-0P 142768-92-1P 142768-93-2P 142768-94-3P 142768-95-4P  
142768-96-5P 142768-97-6P 142768-98-7P 142768-99-8P 142769-00-4P  
142769-01-5P 142769-02-6P 142769-03-7P 142769-04-8P 142769-05-9P  
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142769-11-7P 142769-12-8P 142769-13-9P 142769-14-0P 142769-15-1P  
142769-16-2P 142769-17-3P 142769-18-4P 142769-19-5P 142769-20-8P  
142769-21-9P 142769-22-0P 142769-23-1P 142769-24-2P 142769-45-7P  
142797-36-2P 142807-47-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as antidiabetic, antiobesity, and antiatherosclerotic agent)

IT 142769-39-9P 142769-42-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as antidiabetic, antiobesity, and antiatherosclerotic agent)

IT 61019-04-3P 63762-71-0P 63762-82-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as intermediate for antidiabetic, antiobesity, and antiatherosclerotic agent)

IT 267-48-1P, 5H-1,3-Dioxolo[4,5-f]indole 3139-05-7P 3139-06-8P  
3139-10-4P 4581-84-4P 6953-22-6P 10601-19-1P 13429-10-2P  
16382-21-1P 16382-24-4P 32996-27-3P 39974-94-2P 40130-97-0P  
61019-03-2P 61019-05-4P 63762-79-8P 63762-80-1P 63762-81-2P  
63762-83-4P 68935-52-4P 77248-65-8P 101966-88-5P 104831-78-9P  
104831-79-0P 142768-85-2P 142769-26-4P 142769-27-5P 142769-28-6P  
142769-29-7P 142769-30-0P 142769-31-1P 142769-33-3P 142769-34-4P  
142769-35-5P 142769-36-6P 142769-37-7P 142769-38-8P 142769-40-2P  
142769-41-3P 142769-43-5P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as intermediate for antidiabetic, antiobesity, and antiatherosclerotic agents)

IT 95-87-4, 2,5-Dimethylphenol 100-44-7, Benzyl chloride, reactions

124-40-3, Dimethylamine, reactions 349-76-8 487-89-8,  
 1H-Indole-3-carboxaldehyde 615-74-7, 2-Chloro-5-methylphenol  
 1006-94-6, 5-Methoxyindole 1215-59-4 2835-98-5, 6-Amino-m-cresol  
 4637-24-5, DMF dimethyl acetal 7145-99-5, 3,4-Methylenedioxytoluene  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in preparation of antidiabetic, antiobesity, and  
 antiatherosclerotic agent)

IT 10075-50-0, 5-Bromoindole  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with methiothiocopper, in preparation of antidiabetic,  
 antiobesity, and antiatherosclerotic agent)

IT 3300-51-4, p-Trifluoromethylbenzylamine  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reductive amination by, of indolecarboxaldehyde deriv)

IT 100-46-9, Benzylamine, reactions 100-81-2, 3-Methylbenzylamine  
 109-12-6, 2-Aminopyrimidine 617-89-0, Furfurylamine 618-36-0,  
 $\alpha$ -Methylbenzylamine 2393-23-9, 4-Methoxybenzylamine 18469-52-8  
 20989-17-7, (S)-Phenylglycinol 56613-80-0, R-Phenylglycinol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reductive amination by, of indolecarboxaldehyde derivative)

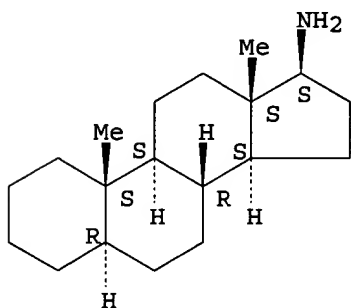
IT 19012-03-4, 1-Methylindole-3-carboxaldehyde 142769-51-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reductive amination of, in preparation of antidiabetic, antiobesity, and  
 antiatherosclerotic agent)

IT 3886-69-9, R- $\alpha$ -Methylbenzylamine  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reductive condensation of, with indolecarboxaldehyde derivative)

IT 31239-17-5, 17-Aminoandrostande  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (amination by, of indolecarboxaldehyde derivative)

RN 31239-17-5 HCAPLUS  
 CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1988:75714 HCAPLUS  
 DN 108:75714  
 ED Entered STN: 05 Mar 1988  
 TI Steroids and their cyclic hydrocarbon analogs with amino-containing  
 sidechains, useful as antidiabetic agents and inhibitors of phospholipase  
 A2  
 IN Johnson, Roy A.; Bundy, Gordon L.; Youngdale, Gilbert A.; Morton, Douglas  
 R.  
 PA Upjohn Co. , USA  
 SO PCT Int. Appl., 177 pp.

CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C07J041-00  
 ICS C07J043-00; A61K031-56; A61K031-58; C07C087-34; C07C087-455;  
 C07D213-38; C07F009-24; C07F009-22; A61K031-13

CC 32-3 (Steroids)

Section cross-reference(s): 1, 2

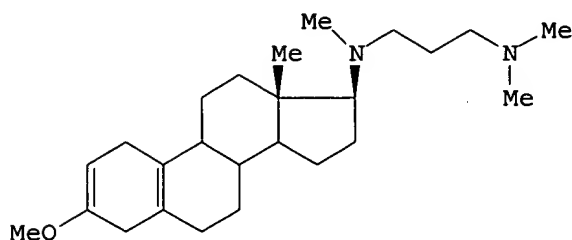
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8702367	A2	19870423	WO 1986-US2116	19861007 <--
	WO 8702367	A3	19880630		
	W: JP, US, US				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
EP	243449	A1	19871104	EP 1986-906569	19861007 <--
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
JP	63501217	T2	19880512	JP 1986-505710	19861007 <--
US	4917826	A	19900417	US 1987-117851	19870616 <--
US	5196542	A	19930323	US 1991-657721	19910220 <--
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PRAI	US 1985-788995	A2	19851018	<--	
	US 1986-843120	A2	19860324	<--	
	WO 1986-US2116	W	19861007	<--	
	US 1987-117851	A3	19870616	<--	
	US 1989-394396	A3	19890815	<--	
	US 1991-657721	A3	19910220	<--	
	US 1991-657729	B1	19910220	<--	
	US 1991-793486	A3	19911113	<--	
	US 1992-972693	A3	19921106	<--	
	US 1992-976751	A3	19921116	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 8702367	ICM	C07J041-00
	ICS	C07J043-00; A61K031-56; A61K031-58; C07C087-34; C07C087-455; C07D213-38; C07F009-24; C07F009-22; A61K031-13
US 4917826	NCL	552/522.000; 514/169.000; 514/182.000; 514/237.800; 514/253.020; 514/351.000; 514/352.000; 514/381.000; 514/398.000; 514/399.000; 514/400.000; 514/424.000; 514/426.000; 514/471.000; 514/472.000; 514/866.000; 544/154.000; 544/380.000; 546/300.000; 546/304.000; 546/307.000; 546/312.000 <--
US 5196542	NCL	546/326.000; 540/107.000; 546/333.000; 564/460.000 <--
US 5145874	NCL	514/650.000; 514/529.000; 514/532.000; 514/533.000; 514/534.000; 514/538.000; 514/545.000; 514/579.000; 514/613.000; 514/616.000; 514/617.000; 514/618.000; 514/619.000; 514/620.000; 514/621.000; 514/622.000; 514/623.000; 514/642.000; 564/281.000; 564/337.000; 564/453.000; 564/454.000; 564/455.000; 564/456.000; 564/461.000 <--
US 5187299	NCL	552/522.000; 552/554.000 <--
US 5274089	NCL	540/112.000; 552/522.000 <--
US 5334712	NCL	540/112.000; 540/117.000; 552/522.000 <--

US 5373095 ECLA C07C087/28; C07C087/40; C07C103/44; C07C103/737;  
 C07D213/38; C07F009/22C; C07F009/24C1+U; C07J041/00B;  
 C07J041/00C6; C07J041/00C40; C07J043/00B; C07J051/00<--  
 NCL 540/095.000; 540/106.000  
 ECLA C07C087/28; C07C087/40; C07C103/44; C07C103/737;  
 C07D213/38; C07F009/22C; C07F009/24C1+U; C07J041/00B;  
 C07J041/00C6; C07J041/00C40; C07J043/00B; C07J051/00<--  
 US 5621123 NCL 552/522.000; 552/554.000  
 ECLA C07J041/00B; C07J041/00C6 <--  
 OS CASREACT 108:75714  
 GI



AB A wide variety of steroids and nonsteroidal analogs bearing amino-containing sidechains were prepared for use as antidiabetic agents and in the treatment or prevention of phospholipase A2-mediated conditions. Reductive amination of estrone Me ether with Me<sub>2</sub>N(CH<sub>2</sub>)<sub>3</sub>NH<sub>2</sub> and HCO<sub>2</sub>H at 160-170° gave N-[3-(dimethylamino)propyl]-N-formyl-3-methoxyestra-1,3,5(10)-trien-17β-amine, which was reduced by LiAlH<sub>4</sub> in dioxane to the N-Me derivative. This underwent Birch reduction, followed by 3 recrystns. in Et<sub>2</sub>O-MeCN, to give estradienamine derivative I. In the perfused guinea pig lung, I completely inhibited phospholipase A2 at 4 × 10<sup>-7</sup> M.

ST amino steroid prepn antidiabetic phospholipase inhibitor; estranamine prepn antidiabetic phospholipase inhibitor

IT Antidiabetics and Hypoglycemics  
 (amino steroids and analogs)

IT Steroids, preparation  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (amino, preparation of, and analogs, as phospholipase A2 inhibitors and antidiabetic agents)

IT 9001-84-7, Phospholipase A2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (inhibitors of, amino-containing steroids and analogs as)

IT 53-44-1P 1434-85-1P, 17β-Hydroxy-5α-estran-3-one 1624-73-3P  
 5997-25-1P 30933-83-6P 40216-82-8P, Ornithine methyl ester dihydrochloride 57133-29-6P 75950-19-5P 76555-98-1P 112646-79-4P  
 112647-70-8P 112648-94-9P 112648-95-0P 112648-96-1P 112648-97-2P  
 112648-98-3P 112648-99-4P 112649-00-0P 112649-01-1P 112649-02-2P  
 112649-03-3P 112663-20-4P 112663-21-5P 112663-22-6P 112663-31-7P  
 112663-33-9P 112663-34-0P 112663-38-4P 112663-39-5P 112663-40-8P  
 112663-41-9P 112663-42-0P 112663-44-2P 112663-45-3P 112663-46-4P  
 112663-50-0P 112663-51-1P 112663-52-2P 112663-53-3P 112663-54-4P  
 112663-55-5P 112663-56-6P 112663-57-7P 112663-58-8P 112663-59-9P  
 112663-60-2P 112663-61-3P 112663-62-4P 112663-63-5P 112663-67-9P  
 112693-14-8P 112693-15-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, in synthesis of phospholipase A2-inhibiting amino steroids and analogs)

IT 56-18-8P, 3,3'-Iminobis(propylamine) 26358-84-9P 28336-31-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

IT 2640-80-4P 4536-52-1P 4991-61-1P 4991-63-3P 5668-07-5P  
 5997-25-1P 6291-85-6P, 3-Ethoxypropylamine 17630-26-1P 17630-27-2P  
 20432-64-8P 32436-37-6P 57764-88-2P 57764-89-3P 59766-90-4P  
 96148-91-3P 112646-53-4P 112646-54-5P 112646-55-6P 112646-56-7P  
 112646-57-8P 112646-58-9P 112646-59-0P 112646-60-3P 112646-62-5P  
 112646-63-6P 112646-65-8P 112646-67-0P 112646-68-1P 112646-69-2P  
 112646-70-5P 112646-71-6P 112646-72-7P 112646-73-8P 112646-74-9P  
 112646-75-0P 112646-76-1P 112646-77-2P 112646-78-3P 112646-79-4P  
 112646-80-7P 112646-81-8P 112646-82-9P 112646-83-0P 112646-84-1P  
 112646-85-2P 112646-86-3P 112646-87-4P 112646-88-5P 112646-89-6P  
 112646-90-9P 112646-91-0P 112646-92-1P 112646-93-2P 112646-94-3P  
 112646-95-4P 112646-96-5P 112646-97-6P 112646-98-7P 112646-99-8P  
 112647-00-4P 112647-01-5P 112647-02-6P 112647-03-7P 112647-04-8P  
 112647-05-9P 112647-06-0P 112647-07-1P 112647-08-2P 112647-09-3P  
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 112648-74-5P 112648-75-6P 112648-76-7P 112648-77-8P 112648-78-9P  
 112648-79-0P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation of, as phospholipase A2 inhibitor and/or antidiabetic agent)

IT 112648-80-3P 112648-81-4P 112648-82-5P 112648-83-6P 112648-84-7P  
 112648-85-8P 112648-86-9P 112648-87-0P 112648-88-1P 112648-89-2P  
 112648-90-5P 112648-91-6P 112648-92-7P 112648-93-8P 112649-04-4P

112649-05-5P 112649-06-6P 112663-15-7P 112663-16-8P 112663-17-9P  
 112663-18-0P 112663-19-1P 112663-23-7P 112663-24-8P 112663-25-9P  
 112663-26-0P 112663-27-1P 112663-28-2P 112663-29-3P 112663-30-6P  
 112663-32-8P 112663-35-1P 112663-36-2P 112663-47-5P 112663-48-6P  
 112663-49-7P 112663-64-6P 112663-65-7P 112663-66-8P 112710-67-5P  
 112710-68-6P 112710-69-7P 112711-11-2P 112711-12-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation of, as phospholipase A2 inhibitor and/or antidiabetic agent)

IT 50-28-2, reactions 51-67-2, Tyramine 53-16-7, Estrone, reactions  
 53-41-8 53-43-0, 3 $\beta$ -Hydroxy-5-androsten-17-one 53-45-2,  
 Estra-1,3,5(10)-trien-17-one 64-04-0, Phenethylamine 64-18-6,  
 reactions 71-44-3, Spermine 75-07-0, reactions 79-04-9 81-25-4  
 89-97-4, 2-Chlorobenzylamine 90-42-6, 2-Cyclohexyl cyclohexanone  
 91-00-9, Aminodiphenylmethane 92-68-2, 4-Cyclohexylcyclohexanone  
 95-00-1, 2,4-Dichlorobenzylamine 96-32-2, Methyl bromoacetate  
 100-46-9, reactions 100-52-7, reactions 102-49-8, 3,4-  
 Dichlorobenzylamine 104-53-0, Hydrocinnamaldehyde 104-86-9,  
 4-Chlorobenzylamine 104-88-1, 4-Chlorobenzaldehyde, reactions  
 105-39-5, Ethyl chloroacetate 107-13-1, reactions 107-85-7,  
 Isoamylamine 108-00-9, unsym-Dimethyl-ethylenediamine 108-31-6,  
 reactions 108-94-1, reactions 109-01-3, N-Methylpiperazine 109-55-7,  
 3-Dimethylaminopropylamine 109-64-8, 1,3-Dibromopropane 109-76-2,  
 1,3-Propanediamine 110-13-4, 2,5-Hexanedione 110-60-1,  
 1,4-Diaminobutane 111-40-0 123-00-2, 3-Morpholinopropylamine  
 123-38-6, reactions 124-09-4, reactions 124-13-0, Octylaldehyde  
 124-20-9, Spermidine 124-25-4, Tetradecyl aldehyde 138-14-7  
 140-75-0, 4-Fluorobenzylamine 140-80-7, 2-Amino-5-diethylaminopentane  
 156-87-6 327-92-4, 1,5-Difluoro-2,4-dinitrobenzene 333-93-7,  
 1,4-Diaminobutane dihydrochloride 373-44-4, 1,8-Octanediamine  
 462-94-2, 1,5-Diaminopentane 502-72-7, Cyclopentadecanone 506-59-2,  
 Dimethylamine hydrochloride 566-88-1, 5 $\alpha$ -Cholestan-3-one  
 590-86-3, Isovaleraldehyde 593-51-1, Methylamine hydrochloride  
 598-21-0, Bromoacetyl bromide 617-89-0, 2-Aminomethyl-furan 646-25-3,  
 1,10-Decanediamine 700-58-3, 2-Adamantanone 766-39-2,  
 2,3-Dimethylmaleic anhydride 814-68-6, Acryloyl chloride 830-13-7,  
 Cyclododecanone 929-06-6, 2-(2-Aminoethoxy)ethanol 963-74-6,  
 5 $\alpha$ -Androstan-17-one 1035-77-4, Estradiol 3-methyl ether  
 1624-62-0, Estrone methyl ether 1755-52-8 2038-03-1,  
 2-Morpholinoethylamine 2393-23-9, 4-Methoxybenzylamine 2524-64-3,  
 Diphenyl chlorophosphate 2706-56-1, 2-(2-Aminoethyl)pyridine  
 2740-83-2, 3-(Trifluoromethyl)benzylamine 3029-19-4,  
 1-Pyrenecarboxaldehyde 3048-01-9 3179-63-3 3300-51-4,  
 4-(Trifluoromethyl)benzylamine 3731-51-9, 2-(Aminomethyl)pyridine  
 3731-52-0, 3-(Aminomethyl)pyridine 3731-53-1, 4-(Aminomethyl)pyridine  
 4048-33-3, 6-Amino-1-hexanol 4097-89-6, Tris-(2-aminoethyl)amine  
 4894-75-1 5036-48-6 5104-49-4, Flurbiprofen 5538-95-4,  
 N-Dodecyl-1,3-propanediamine 5625-80-9 5680-79-5, Glycine methyl ester  
 hydrochloride 5993-91-9 6211-16-1 6384-10-7, Ornithine methyl ester  
 6711-48-4 7149-10-2 7152-51-4 7209-38-3, 1,4-Bis(3-  
 aminopropyl)piperazine 7663-77-6, 1-(3-Aminopropyl)-2-pyrrolidinone  
 10025-87-3 10517-44-9 13258-63-4, 4-(2-Aminoethyl)pyridine  
 14210-25-4 19475-35-5 21370-71-8, trans-1-Decalone 27757-85-3,  
 2-Thiophenemethylamine 28143-91-1 29602-39-9 30525-89-4,  
 Paraformaldehyde 31239-17-5, 5 $\alpha$ -Androstan-17 $\beta$ -amine  
 34015-48-0, Lysine methyl ester dihydrochloride 35303-76-5,  
 4-(2-Aminoethyl)benzenesulfonamide 40226-15-1 42014-51-7 49783-80-4  
 55757-60-3 56183-69-8, Diethyl phosphorohydrazidate 69225-59-8  
 75659-75-5 83732-75-6, 2-(2-Aminoethyl)-1-methylpyrrole 85666-15-5



112663-37-3 112663-43-1

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in synthesis of phospholipase A2-inhibiting amino  
 steroids and analogs)

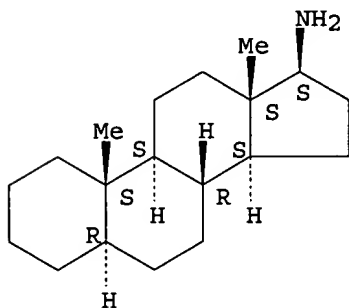
IT 31239-17-5, 5 $\alpha$ -Androstan-17 $\beta$ -amine

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in synthesis of phospholipase A2-inhibiting amino  
 steroids and analogs)

RN 31239-17-5 HCAPLUS

CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1980:181459 HCAPLUS

DN 92:181459

ED Entered STN: 12 May 1984

TI Acid-catalyzed decomposition of (20R) and (20S)-20-azido-5 $\alpha$ -pregnane:  
 bis steroid Schiff base formation via imine coupling

AU Kabore, I. Z.; Khuong-Huu, Q.; Pancrazi, A.

CS Inst. Chim. Subst. Nat., Gif-sur-Yvette, 91190, Fr.

SO Tetrahedron Letters (1979), (28), 2613-14

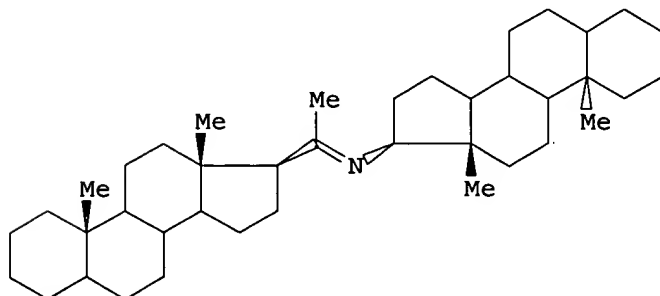
CODEN: TELEAY; ISSN: 0040-4039

DT Journal

LA English

CC 32-5 (Steroids)

GI

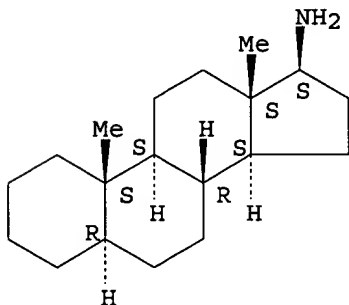


I

AB BF3.Et2O-catalyzed decomposition of the title pregnanes gave, after hydrolysis  
 with aqueous NaOH, 74% Schiff base I. The formation of I involves coupling of  
 an imine intermediate with an iminium complex.

ST coupling azidopregnane decompn; androstanyliminopregnane; pregnane azido decompn coupling  
 IT Coupling reaction  
 (of azidoprepanes during boron trifluoride etherate-catalyzed decomposition)  
 IT Steroids, reactions  
 (20-azido, decomposition and steroid coupling reaction of)  
 IT 14964-30-8 14964-31-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (decomposition and steroid coupling reaction of)  
 IT 848-62-4P 20853-63-8P 31239-17-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT 31239-17-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 31239-17-5 HCAPLUS  
 CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1974:552498 HCAPLUS  
 DN 81:152498  
 ED Entered STN: 12 May 1984  
 TI Bromo, chloro, and amino derivatives of 5 $\alpha$ -androstande and 5 $\alpha$ -estrane  
 AU Cowell, David B.; Davis, Alan K.; Mathieson, David W.; Nicklin, Paul D.  
 CS Sch. Pharm., Univ. Bradford, Bradford, UK  
 SO Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1974), (13), 1505-13  
 CODEN: JCPRB4; ISSN: 0300-922X  
 DT Journal  
 LA English  
 CC 32-4 (Steroids)  
 AB 5 $\alpha$ -Androstandols and (hydroxyimino)-5 $\alpha$ -androstandes gave by standard procedures the chloro-, bromo-, amino-, and acetamido-5 $\alpha$ -androstandes. 5 $\alpha$ -Estran-17 $\beta$ -ol with PCl<sub>5</sub> gave 17 $\alpha$ -chloro-5 $\alpha$ -estrane.  
 ST androstande bromo chloro amino; estrane chloro; bromination steroid hydroxy; chlorination steroid hydroxy  
 IT Steroids, preparation  
 RL: PREP (Preparation)  
 (bromo, chloro, and amino)  
 IT Bromination  
 Chlorination

(of androstanes)

IT Oximes  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(steroidal, preparation and reduction of)

IT 7459-06-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(dehydrobromination of)

IT 1032-15-1 1224-92-6 1225-43-0 1476-64-8 17320-50-2 19037-33-3  
20311-10-8 20707-77-1 20707-78-2 20707-85-1 25814-80-6  
32215-75-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(halogenation of)

IT 35494-01-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrogenation of)

IT 2232-18-0 32222-21-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrogenation of, in presence of methanol)

IT 1058-63-5 1254-34-8 54155-80-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrolysis of)

IT 7459-05-4P 54156-09-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and halogenation of)

IT 1035-62-7P 14475-43-5P 54156-21-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and reduction of)

IT 1032-14-0P 2872-91-5P 4642-61-9P 7657-50-3P 13067-44-2P  
19037-31-1P 20985-60-8P 21002-27-7P 29096-82-0P **31239-17-5P**  
**31239-23-3P** 31239-24-4P 51092-05-8P 54155-78-1P  
54155-79-2P 54155-81-6P 54155-82-7P 54155-83-8P 54155-84-9P  
54155-85-0P 54155-86-1P 54155-87-2P 54155-88-3P 54155-89-4P  
54155-90-7P 54155-91-8P 54155-92-9P 54155-93-0P 54155-94-1P  
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54156-00-2P 54156-01-3P 54156-02-4P 54156-03-5P 54156-04-6P  
54156-05-7P 54156-06-8P 54156-07-9P 54156-08-0P 54156-10-4P  
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54156-27-3P 54156-28-4P 54156-29-5P 54156-30-8P 54156-31-9P  
54156-32-0P 54156-33-1P 54156-34-2P 54156-35-3P **54156-36-4P**  
**54156-37-5P** 54156-38-6P 54156-39-7P 54156-40-0P  
54156-41-1P 54156-42-2P 54156-43-3P 54156-44-4P 54156-45-5P  
54156-46-6P 54156-47-7P 54156-48-8P 54156-49-9P 54165-72-9P  
54196-24-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

IT 963-74-6 1032-16-2 1224-95-9 1225-48-5 1755-32-4 3676-06-0  
13583-70-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with hydrazine)

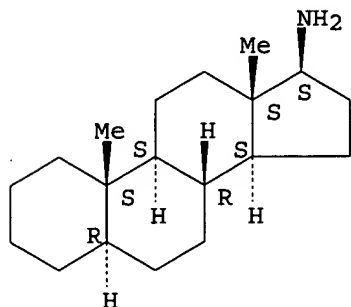
IT 14546-37-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reduction of)

IT **31239-17-5P** **31239-23-3P** **54156-36-4P**  
**54156-37-5P**  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 31239-17-5 HCAPLUS

CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

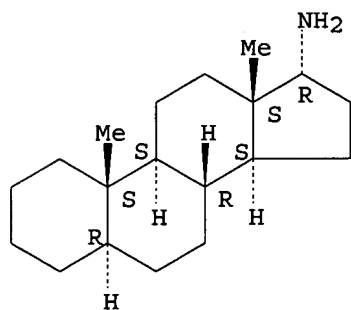
Absolute stereochemistry.



RN 31239-23-3 HCAPLUS

CN Androstan-17-amine, (5 $\alpha$ ,17 $\alpha$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 54156-36-4 HCAPLUS

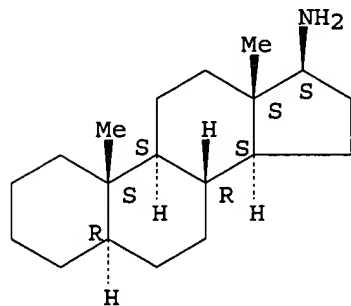
CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )-, acetate (9CI) (CA INDEX NAME)

CM 1

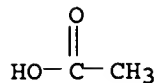
CRN 31239-17-5

CMF C19 H33 N

Absolute stereochemistry.

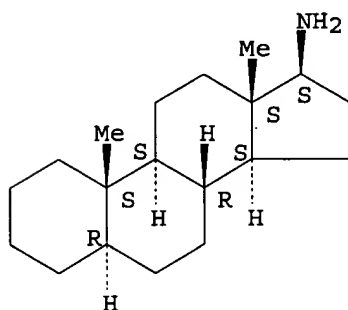


CM 2

CRN 64-19-7  
CMF C2 H4 O2

RN 54156-37-5 HCAPLUS  
CN Androstan-17-amine, hydrochloride, (5 $\alpha$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● HCl

L34 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 1971:528415 HCAPLUS  
DN 75:128415  
ED Entered STN: 12 May 1984  
TI Steroids and steroidases. 10. Potentially antitumor active androstane compounds containing C-17 nitrogen mustard functions  
AU Jones, J. Bryan; Adam, David J.; Leman, Jeffrey D.  
CS Dep. Chem., Univ. Toronto, Toronto, ON, Can.  
SO Journal of Medicinal Chemistry (1971), 14(9), 827-33  
CODEN: JMCMAR; ISSN: 0022-2623  
DT Journal  
LA English  
CC 15 (Pharmacodynamics)  
OS CASREACT 75:128415  
GI For diagram(s), see printed CA Issue.  
AB When tested on mice with mammary tumors, 17 $\beta$ -bis(2-chloroethyl)aminoandro-4-ene-3-one and 3-chloro-17 $\beta$ -bis(2-hydroxyethyl)aminoandro-3,5-diene was ineffective and 17 $\beta$ -bis(2-chloroethyl)amino-5 $\alpha$ -andro-2-ene (I) showed moderate antitumor activity. Synthetic studies and review of the literature showed that approaches involving N(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub> derivs. were the most reliable routes to steroidal N mustards where bonding of the mustard via a CN bond was required. The final chlorination step was critical. When functional groups other than N(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub> were absent, POCl<sub>3</sub> was the preferred chlorinating agent. When ketone or  $\alpha,\beta$ -unsatd.

ketone functions were present, MeSO<sub>2</sub>Cl in pyridine was the reagent of choice. Mustard precursors containing primary or secondary OH functions may undergo chlorination with inversion using SOCl<sub>2</sub>. A review is given on the evaluation of the potential of steroid nitrogen mustards.

ST antitumor steroid nitrogen mustards; androstane nitrogen mustards

IT Mammary glands

(neoplasms of, steroidal nitrogen mustards effect on)

IT Neoplasm inhibitors

(steroidal nitrogen mustards)

IT Neoplasms

(steroidal nitrogen mustards effect on mammary)

IT Androsta-3,5-diene-17 $\beta$ -amine, 3-chloro-N,N-bis(2-hydroxyethyl)-

Ethanol, 2,2'-[(3-chloroandrosta-3,5-diene-17 $\beta$ -yl)imino]di-

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(mammary neoplasm response to)

IT 33068-77-8 33068-79-0 34327-34-9 34327-35-0 34327-36-1

34327-38-3 34327-43-0 34327-44-1 34327-45-2 34327-46-3

34327-47-4 34336-34-0 34336-35-1

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(mammary neoplasm response to)

IT 1259-41-2P 1865-60-7P 3932-07-8P 31239-22-2P 31239-23-3P

34327-37-2P 34327-39-4P 34327-42-9P 34327-48-5P 34336-31-7P

34336-32-8P 34336-33-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

IT 31239-23-3P

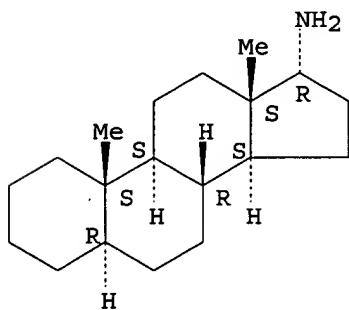
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of)

RN 31239-23-3 HCAPLUS

CN Androstan-17-amine, (5 $\alpha$ ,17 $\alpha$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1971:125901 HCAPLUS

DN 74:125901

ED Entered STN: 12 May 1984

TI Steroid alkaloids. CXIX. NMR spectrum of epimeric aminated steroids in the presence of Eu(dpm)<sub>3</sub>

AU Lacombe, Liliane; Khuong-Huu-Laine, Francoise; Pancrazi, Ange; Khuong-Huu-Qui; Lukacs, Gabor

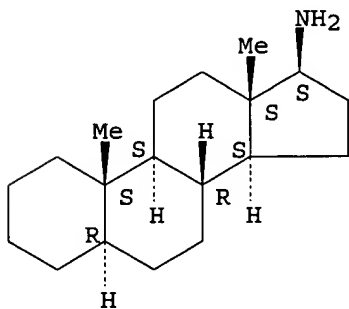
CS Lab. Chim. Org. Hormones, Coll. France, Paris, Fr.

SO Comptes Rendus des Seances de l'Academie des Sciences, Serie C: Sciences Chimiques (1971), 272(7), 668-71

CODEN: CHDCAQ; ISSN: 0567-6541

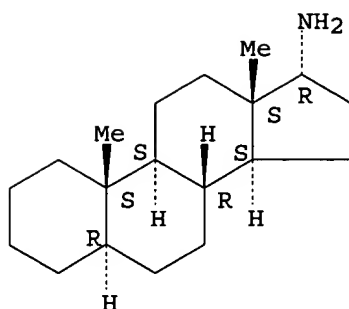
DT Journal  
 LA French  
 CC 32 (Steroids)  
 AB By studying displacement of PMR chemical shifts in the presence of  $\text{Eu}(\text{dpm})_3$  (dpm = dipivalomethanato) individual proton signals were assigned and the stereochemistry of the A/B and C/D ring junctions were determined in the epimeric amino steroids,  $3\alpha$ - and  $3\beta$ -amino- $5\alpha$ -pregnane, and  $17\alpha$ - and  $17\beta$ -amino- $5\alpha$ -androstande. As in complexes of other compds. with  $\text{Eu}(\text{dpm})_3$ , the signals of protons closest to Eu are displaced most.  
 ST steroids amino epimer NMR; europium dipivalomethanato aminosteroids NMR  
 IT Steroids, properties  
 RL: PRP (Properties)  
 (amino, N.M.R. of, in presence of europium complexes)  
 IT 15522-71-1  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (nuclear magnetic resonance of amino steroids in presence of)  
 IT 10308-45-9 10308-46-0 31239-17-5 31239-23-3  
 RL: PRP (Properties)  
 (nuclear magnetic resonance of, in presence of europium complex)  
 IT 1118-71-4DP, 3,5-Heptanedione, 2,2,6,6-tetramethyl-, europium complexes  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT 31239-17-5 31239-23-3  
 RL: PRP (Properties)  
 (nuclear magnetic resonance of, in presence of europium complex)  
 RN 31239-17-5 HCAPLUS  
 CN Androstan-17-amine, ( $5\alpha,17\beta$ ) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 31239-23-3 HCAPLUS  
 CN Androstan-17-amine, ( $5\alpha,17\alpha$ ) - (9CI) (CA INDEX NAME)

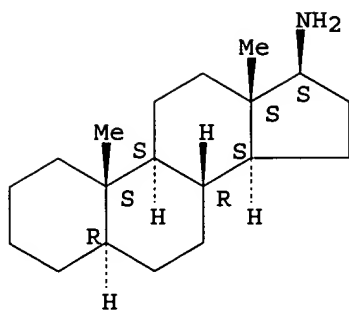
Absolute stereochemistry.



L34 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1971:88205 HCAPLUS  
 DN 74:88205  
 ED Entered STN: 12 May 1984  
 TI Steroid alkaloids. CVII. Photochemistry of azido steroids  
 AU Pancrazi, Ange; Khuong-Huu-Quy; Goutarel, Robert  
 CS Inst. Chim. Subst. Natur., CNRS, Gif-sur-Yvette, Fr.  
 SO Bulletin de la Societe Chimique de France (1970), (12), 4446-51  
 CODEN: BSCFAS; ISSN: 0037-8968  
 DT Journal  
 LA French  
 CC 32 (Steroids)  
 GI For diagram(s), see printed CA Issue.  
 AB Photolysis of nonaromatic azides occurs by formation of activated nitrenes which, in the presence of triplet quencher, isomerize to imines, and in the presence of a sensitizer, isomerize to imines or abstract H from the solvent to give primary amines. The photolysis of 3 $\beta$ ,20 $\alpha$ -diazidopregn-5-ene in cyclohexane failed to yield conessine (Barton, D. H. R. and Morgan, L. R., Jr., 1962). Reduction of the products with LiAlH<sub>4</sub> gave mainly 3 $\xi$ ,20 $\xi$ -bis(dimethylamino)-pregn-5-ene. The photolysis of 20 $\alpha$ -azido-5 $\alpha$ -pregnane yielded mainly the Schiff base (I), probably through dimerization of nitrenes followed by isomerization, elimination of 1 of the 2 N atoms, formation of radicals, and coupling.  
 ST photolysis azido pregnanes; azido pregnanes photolysis; pregnanes azido photolysis; irradiation azomethines pregnanes; azomethines pregnanes irradiation; conessines azido pregnanes  
 IT Steroids, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (azido, photolysis of)  
 IT 7332-00-5 31239-22-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (photolysis of)  
 IT 166-37-0DP, Cyclobuta[2,3]cyclopenta[1,2-a]phenanthrene, steroid derivs.  
 848-62-4P 963-74-6P 7707-71-3P 17291-32-6P 20853-63-8P  
 20853-64-9P 25829-97-4P 31239-17-5P 31239-23-3P  
 31239-24-4P 31239-25-5P 31239-26-6P 31239-27-7P 31239-28-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT 31239-17-5P 31239-23-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 31239-17-5 HCAPLUS  
 CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

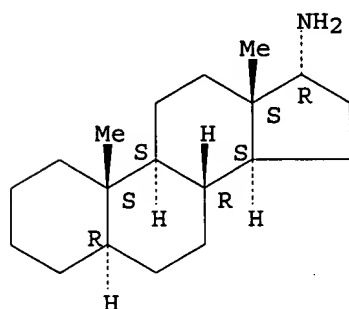




RN 31239-23-3 HCAPLUS

CN Androstan-17-amine, (5 $\alpha$ ,17 $\alpha$ )-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L34 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1967:76285 HCAPLUS

DN 66:76285

ED Entered STN: 12 May 1984

TI Synthesis of 3 $\beta$ -acetoxy-17 $\beta$ -(L-arginyl-L-arginyl-L-prolyl) amino-5  $\alpha$ -androstande

AU Pettit, George R.; Smith, Robert Lawrence; Klinger, J.

CS Univ. of Maine, Orono, ME, USA

SO Journal of Medicinal Chemistry (1967), 10(2), 145-8

CODEN: JMCMAR; ISSN: 0022-2623

DT Journal

LA English

CC 34 (Synthesis of Amino Acids, Peptides, and Proteins)

GI For diagram(s), see printed CA Issue.

AB A steroidal peptide based on the 17-19 unit sequence of  $\beta$ -corticotropin was synthesized. Construction of the title substance (I) was achieved starting from 3 $\beta$ -hydroxy-17 $\beta$ -amino-5 $\alpha$ -androstande. The phenylisoxazolium method was used for peptide bond formation and a combination of acetyl (for the steroid nucleus), carbobenzoxy, and nitro (for arginine) protecting groups were employed. I was characterized as the triacetate derivative and the assigned structure received addnl. support from results of an amino acid analysis.

ST CORTICOTROPINS STERIOD PEPTIDES HORMONES; TRIPEPTIDES ANDROSTANES; STERIOD PEPTIDES HORMONES CORTICOTROPINS; HORMONES CORTICOTROPINS STERIOD PEPTIDES; ANDROSTANES TRIPEPTIDES; PEPTIDES STERIOD HORMONES CORTICOTROPINS

IT 5 $\alpha$ -Androstan-3 $\beta$ -ol, 17 $\beta$ -[1-[N2-[N2-carboxy-N5-

(nitroamidino)-L-ornithyl]-N5-(nitroamidino)-L-ornithyl]-2-pyrrolidinecarboxamido, benzyl ester, acetate (ester)  
 Prolinamide, N $\alpha$ -carboxy-NG-nitro-L-arginyl-NG-nitro-L-arginyl-N-(3 $\beta$ -hydroxy-5 $\alpha$ -androstan-17 $\beta$ -yl)-, benzyl ester, acetate (ester), L-

Prolinamide, N $\alpha$ -carboxy-NG-nitro-L-arginyl-NG-nitro-L-arginyl-N-(3 $\beta$ -hydroxy-5 $\alpha$ -androstan-17 $\beta$ -yl)-, benzyl ester, acetate ester, L-

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

IT 2149-70-4P 2304-98-5P 10463-56-6P 10463-58-8P 10463-59-9P  
 10463-60-2P 13574-67-9P **13574-69-1P** **13574-72-6P**  
 13794-76-8P 13794-77-9P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

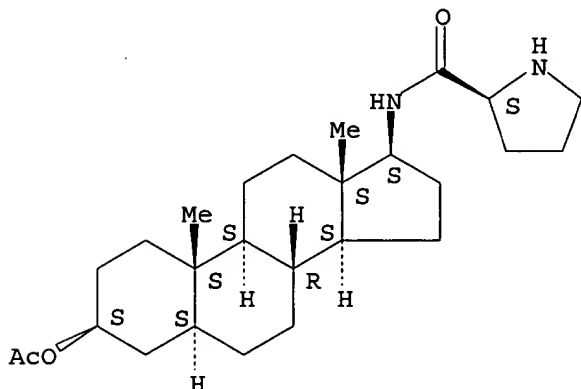
IT **13574-69-1P** **13574-72-6P**

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

RN 13574-69-1 HCAPLUS

CN 2-Pyrrolidinecarboxamide, N-[(3 $\beta$ ,5 $\alpha$ ,17 $\beta$ )-3-(acetyloxy)androstan-17-yl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 13574-72-6 HCAPLUS

CN 2-Pyrrolidinecarboxamide, N-(3 $\beta$ -hydroxy-5 $\alpha$ -androstan-17 $\beta$ -yl)-, acetate (ester), monohydrochloride, L- (8CI) (CA INDEX NAME)

Absolute stereochemistry.



L35 ANSWER 1 OF 9 USPATFULL on STN  
 AN 2003:306925 USPATFULL  
 TI Therapeutic compositions effective against gram positive bacteria  
 IN Pettit, George R., Paradise Valley, AZ, UNITED STATES  
 Pettit, Robin K., Fountain Hills, AZ, UNITED STATES  
 PI US 2003216361 A1 20031120  
 AI US 2001-893861 A1 20010628 (9)  
 PRAI US 2000-214844P 20000628 (60)  
 DT Utility  
 FS APPLICATION  
 LREP FENNEMORE CRAIG, 3003 N. Central Avenue, Suite 2600, Phoenix, AZ, 85012  
 CLMN Number of Claims: 16  
 ECL Exemplary Claim: 1  
 DRWN 3 Drawing Page(s)  
 LN.CNT 755

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to compounds of the formula ##STR1## and to pharmaceutically acceptable salts thereof, wherein R.sup.1 and R.sup.2 are as defined herein. The compounds are useful as anti-microbial agents, most specifically against gram positive bacteria. The invention further relates to pharmaceutical compositions and methods of treating bacterial infection using such compositions.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

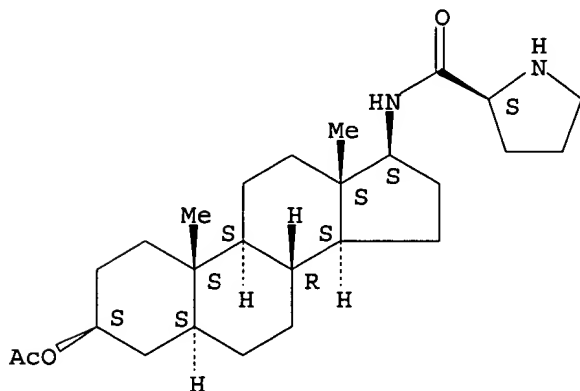
IT 13574-69-1

(androstane amides effective against Gram-pos. bacteria)

RN 13574-69-1 USPATFULL

CN 2-Pyrrolidinecarboxamide, N-[(3 $\beta$ ,5 $\alpha$ ,17 $\beta$ )-3-(acetyloxy)androstan-17-yl]-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L35 ANSWER 2 OF 9 USPATFULL on STN

AN 97:31841 USPATFULL

TI Cyclic hydrocarbons with an aminoalkyl sidechain

IN Johnson, Roy A., Kalamazoo, MI, United States

Bundy, Gordon L., Portage, MI, United States

Youngdale, Gilbert A., Portage, MI, United States

Morton, Douglas R., Portage, MI, United States

Wallach, deceased, Donald P., late of Kalamazoo, MI, United States

Wallach, legal representative, Vera M., Richland, MI, United States

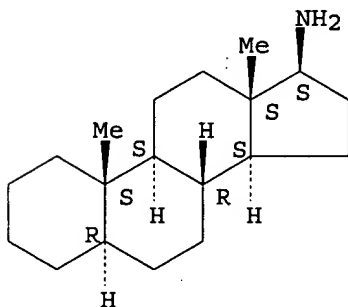
PA The Upjohn Company, Kalamazoo, MI, United States (U.S. corporation)

/ PI US 5621123 19970415  
 AI US 1994-247169 19940520 (8)  
 DCD 20100216  
 RLI Division of Ser. No. US 1992-976751, filed on 16 Nov 1992, now patented, Pat. No. US 5334712, issued on 2 Aug 1994 which is a division of Ser. No. US 1991-657721, filed on 20 Feb 1991, now patented, Pat. No. US 5196542, issued on 23 Mar 1993 which is a division of Ser. No. US 1989-394396, filed on 15 Aug 1989, now abandoned which is a division of Ser. No. US 1987-117851, filed on 16 Jun 1987, now patented, Pat. No. US 4917826 which is a continuation-in-part of Ser. No. US 1986-843120, filed on 24 Mar 1986, now abandoned which is a continuation-in-part of Ser. No. US 1985-788995, filed on 18 Oct 1985, now abandoned  
 DT Utility  
 FS Granted  
 EXNAM Primary Examiner: Shah, Mukund J.; Assistant Examiner: Sripada, Pavanaram K.  
 LREP Wootton, Thomas A.  
 CLMN Number of Claims: 4  
 ECL Exemplary Claim: 1  
 DRWN No Drawings  
 LN.CNT 368  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 AB Provided are cyclic hydrocarbons of Formula I ##STR1## with an aminoalkyl sidechain that are useful for treating phospholipase A2 mediated conditions, diabetes, and obesity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 31239-17-5, 5 $\alpha$ -Androstan-17 $\beta$ -amine  
 (reaction of, in synthesis of phospholipase A2-inhibiting amino  
 steroids and analogs)  
 RN 31239-17-5 USPATFULL  
 CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



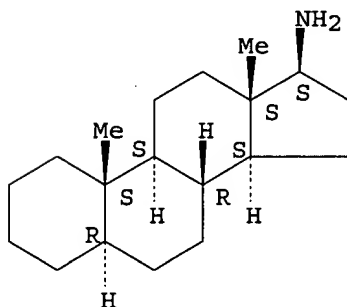
L35 ANSWER 3 OF 9 USPATFULL on STN  
 AN 94:109016 USPATFULL  
 TI Steroid compounds  
 IN Johnson, Roy A., Kalamazoo, MI, United States  
 Bundy, Gordon L., Portage, MI, United States  
 Youngdale, Gilbert A., Portage, MI, United States  
 Morton, Douglas R., Portage, MI, United States  
 Wallach, deceased, Donald P., late of Richland, MI, United States by  
 Vera M. Wallach, legal representative  
 PA The Upjohn Company, Kalamazoo, MI, United States (U.S. corporation)  
 PI US 5373095 19941213

AI US 1993-126153 19930923 (8)  
 RLI Division of Ser. No. US 1992-972693, filed on 6 Nov 1992, now patented, Pat. No. US 5274089 which is a division of Ser. No. US 1991-793486, filed on 13 Nov 1991, now patented, Pat. No. US 5187299 which is a continuation of Ser. No. US 1991-657729, filed on 20 Feb 1991, now abandoned which is a division of Ser. No. US 1989-394396, filed on 15 Aug 1989, now abandoned which is a division of Ser. No. US 1987-117851, filed on 16 Jun 1987, now patented, Pat. No. US 4917826 which is a continuation-in-part of Ser. No. US 1986-843120, filed on 24 Mar 1986, now abandoned which is a continuation-in-part of Ser. No. US 1985-788995, filed on 8 Oct 1985, now abandoned  
 DT Utility  
 FS Granted  
 EXNAM Primary Examiner: Richter, Johann; Assistant Examiner: Cook, Rebecca  
 LREP Wootton, Thomas A.  
 CLMN Number of Claims: 2  
 ECL Exemplary Claim: 1  
 DRWN No Drawings  
 LN.CNT 4711  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 AB Provided are cyclic hydrocarbons of Formula I ##STR1## with an aminoalkyl sidechain that are useful for treating phospholipase A2 mediated conditions, diabetes, and obesity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 31239-17-5, 5 $\alpha$ -Androstan-17 $\beta$ -amine  
 (reaction of, in synthesis of phospholipase A2-inhibiting amino steroids and analogs)  
 RN 31239-17-5 USPATFULL  
 CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L35 ANSWER 4 OF 9 USPATFULL on STN  
 AN 94:66602 USPATFULL  
 TI Cyclic hydrocarbons with an aminoalkyl sidechain  
 IN Johnson, Roy A., Kalamazoo, MI, United States  
 Bundy, Gordon L., Portage, MI, United States  
 Youngdale, Gilbert A., Portage, MI, United States  
 Morton, Douglas R., Portage, MI, United States  
 Wallach, deceased, Donald P., late of Richland, MI, United States by  
 Vera M. Wallach, Legal Representative  
 PA The Upjohn Company, Kalamazoo, MI, United States (U.S. corporation)  
 PI US 5334712 19940802  
 AI US 1992-976751 19921116 (7)  
 RLI Division of Ser. No. US 1991-657721, filed on 20 Feb 1991, now patented,

Pat. No. US 5196524, issued on 23 Mar 1993 which is a division of Ser. No. US 1989-394396, filed on 15 Aug 1989, now abandoned which is a division of Ser. No. US 1987-117851, filed on 16 Jun 1987, now patented, Pat. No. US 4917826 which is a continuation-in-part of Ser. No. US 1986-843120, filed on 24 Mar 1986, now abandoned which is a continuation-in-part of Ser. No. US 1985-788995, filed on 18 Oct 1985, now abandoned

DT Utility  
 FS Granted  
 EXNAM Primary Examiner: Shahl, Mukund J.; Assistant Examiner: Sripada, P. K.  
 LREP Wootton, Thomas A.  
 CLMN Number of Claims: 5  
 ECL Exemplary Claim: 1  
 DRWN No Drawings  
 LN.CNT 4587

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Provided are cyclic hydrocarbons of Formula I ##STR1## with an aminoalkyl sidechain that are useful for treating phospholipase A2 mediated conditions, diabetes, and obesity.

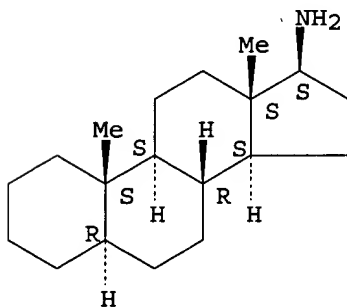
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 31239-17-5, 5 $\alpha$ -Androstan-17 $\beta$ -amine  
 (reaction of, in synthesis of phospholipase A2-inhibiting amino steroids and analogs)

RN 31239-17-5 USPATFULL

CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L35 ANSWER 5 OF 9 USPATFULL on STN

AN 93:109187 USPATFULL

TI Cyclic hydrocarbons with an aminoalkyl sidechain

IN Bundy, Gordon L., Kalamazoo, MI, United States  
 Wallach, deceased, Donald P., late of Richland, MI, United States by  
 Vera M. Wallach, legal representative

PA The Upjohn Company, Kalamazoo, MI, United States (U.S. corporation)

PI US 5274089 19931228

AI US 1992-972693 19921106 (7)

RLI Division of Ser. No. US 1991-793486, filed on 13 Nov 1991, now patented, Pat. No. US 5187299 which is a continuation of Ser. No. US 1991-657729, filed on 20 Feb 1991, now abandoned which is a division of Ser. No. US 1989-394396, filed on 15 Aug 1989, now abandoned which is a division of Ser. No. US 1987-117851, filed on 16 Jun 1987, now patented, Pat. No. US 4917826 which is a continuation of Ser. No. US 1986-102116, filed on 7 Oct 1986, now abandoned which is a continuation-in-part of Ser. No. US 1986-843120, filed on 24 Mar 1986, now abandoned which is a

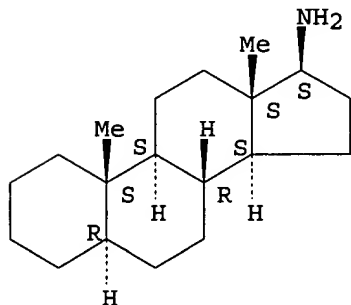
continuation-in-part of Ser. No. US 1985-788995, filed on 18 Oct 1985,  
now abandoned

DT Utility  
FS Granted  
EXNAM Primary Examiner: Cintins, Marianne M.; Assistant Examiner: Kestler,  
Kimberly J.  
LREP Wootton, Thomas A.  
CLMN Number of Claims: 3  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 4555  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
AB Provided are cyclic hydrocarbons of Formula I ##STR1## with an  
aminoalkyl sidechain that are useful for treating phospholipase A2  
mediated conditions, diabetes, and obesity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 31239-17-5, 5 $\alpha$ -Androstan-17 $\beta$ -amine  
(reaction of, in synthesis of phospholipase A2-inhibiting amino  
steroids and analogs)  
RN 31239-17-5 USPATFULL  
CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L35 ANSWER 6 OF 9 USPATFULL on STN  
AN 93:22826 USPATFULL  
TI Cyclic hydrocarbons with an aminoalkyl sidechain  
IN Johnson, Roy A., Kalamazoo, MI, United States  
Bundy, Gordon L., Portage, MI, United States  
Youngdale, Gilbert A., Portage, MI, United States  
Morton, Douglas R., Portage, MI, United States  
Wallach, deceased, Donald P., late of Richland, MI, United States by  
Vera M. Wallach, legal representative  
PA The Upjohn Company, Kalamazoo, MI, United States (U.S. corporation)  
PI US 5196542 19930323  
AI US 1991-657721 19910220 (7)  
RLI Division of Ser. No. US 1989-394396, filed on 15 Aug 1989 which is a  
division of Ser. No. US 1987-117851, filed on 16 Jun 1987, now patented,  
Pat. No. US 4917826 which is a continuation-in-part of Ser. No. US  
1986-843120, filed on 24 Mar 1986, now abandoned which is a  
continuation-in-part of Ser. No. US 1985-788995, filed on 18 Oct 1985,  
now abandoned  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Bond, Robert T.



LREP Wright, Debbie K., Wootton, Thomas A.

CLMN Number of Claims: 3

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 4544

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Provided are cyclic hydrocarbons of Formula I ##STR1## with an aminoalkyl sidechain that are useful for treating phospholipase A2 mediated conditions, diabetes, and obesity.

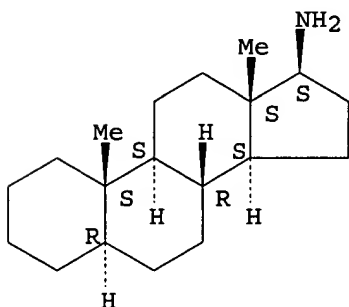
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 31239-17-5, 5 $\alpha$ -Androstan-17 $\beta$ -amine  
(reaction of, in synthesis of phospholipase A2-inhibiting amino  
steroids and analogs)

RN 31239-17-5 USPATFULL

CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ ) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L35 ANSWER 7 OF 9 USPATFULL on STN

AN 93:12656 USPATFULL

TI Cyclic hydrocarbons with an aminoalkyl sidechain

IN Johnson, Roy A., Kalamazoo, MI, United States

Bundy, Gordon L., Portage, MI, United States

Youngdale, Gilbert A., Portage, MI, United States

Morton, Douglas R., Portage, MI, United States

Wallach, deceased, Donald P., late of Portage, MI, United States

Wallach, Legal Representative, by Vera M., Richland, MI, United States

PA The Upjohn Company, Kalamazoo, MI, United States (U.S. corporation)

PI US 5187299 19930216

AI US 1991-793486 19911113 (7)

RLI Continuation of Ser. No. US 1991-657729, filed on 20 Feb 1991, now abandoned which is a division of Ser. No. US 1989-394396, filed on 15 Aug 1989, now abandoned which is a division of Ser. No. US 1987-117851, filed on 16 Jun 1987, now patented, Pat. No. US 4917826 which is a continuation-in-part of Ser. No. US 1986-843120, filed on 24 Mar 1986, now abandoned which is a continuation-in-part of Ser. No. US 1985-788995, filed on 18 Oct 1985, now abandoned

DT Utility

FS Granted

EXNAM Primary Examiner: Cintins, Marianne M.; Assistant Examiner: Kestler, Kimberly J.

LREP Koivuniemi, Paul J., Wright, Debbie K., Wootton, Thomas A.

CLMN Number of Claims: 5

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 4473

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Provided are cyclic hydrocarbons of Formula I ##STR1## with an aminoalkyl sidechain.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

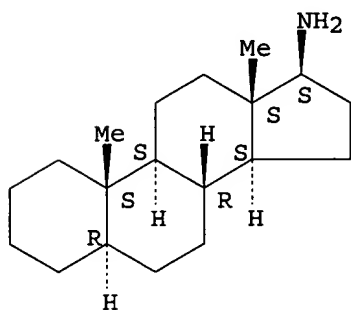
IT 31239-17-5, 5 $\alpha$ -Androstan-17 $\beta$ -amine

(reaction of, in synthesis of phospholipase A2-inhibiting amino  
steroids and analogs)

RN 31239-17-5 USPATFULL

CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L35 ANSWER 8 OF 9 USPATFULL on STN

AN 92:74640 USPATFULL

TI Cyclic hydrocarbons with an aminoalkyl sidechain

IN Johnson, Roy A., Kalamazoo, MI, United States

Bundy, Gordon L., Portage, MI, United States

Youngdale, Gilbert A., Portage, MI, United States

Morton, Douglas R., Portage, MI, United States

Wallach, deceased, Donald P., late of Kalamazoo, MI, United States

Wallach, legal representative, by Vera M., Richland, MI, United States

/ PA The Upjohn Company, Kalamazoo, MI, United States (U.S. corporation)

PI US 5145874 19920908

AI US 1991-663037 19910225 (7)

RLI Continuation of Ser. No. US 1989-394396, filed on 15 Aug 1989, now  
abandoned which is a division of Ser. No. US 1987-117851, filed on 16  
Jun 1987, now patented, Pat. No. US 4917826 which is a  
continuation-in-part of Ser. No. US 1986-843120, filed on 24 Mar 1986,  
now abandoned which is a continuation-in-part of Ser. No. US  
1985-788995, filed on 18 Oct 1985, now abandoned

DT Utility

FS Granted

EXNAM Primary Examiner: Richter, Johann

LREP Wootton, Thomas A., Wright, Debbie K., Koivuniemi, Paul J.

CLMN Number of Claims: 8

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 4780

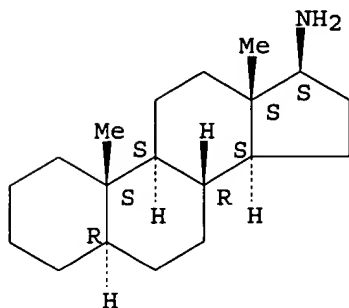
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Provided are cyclic hydrocarbons of Formula I ##STR1## with an  
aminoalkyl sidechain that are useful for treating phospholipase A2  
mediated conditions, diabetes, and obesity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 31239-17-5, 5 $\alpha$ -Androstan-17 $\beta$ -amine  
 (reaction of, in synthesis of phospholipase A2-inhibiting amino  
 steroids and analogs)  
 RN 31239-17-5 USPATFULL  
 CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ ) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.

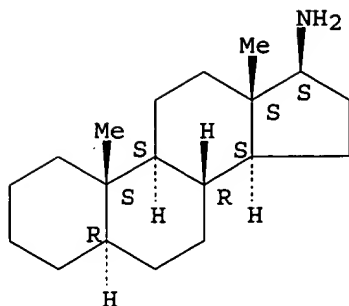


L35 ANSWER 9 OF 9 USPATFULL on STN  
 AN 90:29778 USPATFULL  
 TI Cyclic hydrocarbons with an aminoalkyl sidechain  
 IN Johnson, Roy A., Kalamazoo, MI, United States  
 Bundy, Gordon L., Portage, MI, United States  
 Youngdale, Gilbert A., Portage, MI, United States  
 Morton, Douglas R., Portage, MI, United States  
 Wallach, deceased, Donald P., late of Kalamazoo, MI, United States by  
 Vera M. Wallach, legal representative  
 PA The Upjohn Company, Kalamazoo, MI, United States (U.S. corporation)  
 PI US 4917826 19900417  
 WO 8702367 19870423  
 AI US 1987-117851 19870616 (7)  
 WO 1986-US2116 19861007  
 19870616 PCT 371 date  
 19870616 PCT 102(e) date  
 DT Utility  
 FS Granted  
 EXNAM Primary Examiner: Lee, Mary C.; Assistant Examiner: Richter, J.  
 LREP Koivuniemi, Paul J.  
 CLMN Number of Claims: 3  
 ECL Exemplary Claim: 1  
 DRWN No Drawings  
 LN.CNT 4514  
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
 AB Provided are cyclic hydrocarbons of Formula I ##STR1## with an  
 aminoalkyl sidechain that are useful for treating phospholipase A2  
 mediated conditions, diabetes, and obesity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 31239-17-5, 5 $\alpha$ -Androstan-17 $\beta$ -amine  
 (reaction of, in synthesis of phospholipase A2-inhibiting amino  
 steroids and analogs)  
 RN 31239-17-5 USPATFULL  
 CN Androstan-17-amine, (5 $\alpha$ ,17 $\beta$ ) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> => fil reg

FILE 'REGISTRY' ENTERED AT 08:17:31 ON 24 AUG 2005

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STRUCTURE FILE UPDATES: 22 AUG 2005 HIGHEST RN 861291-85-2

DICTIONARY FILE UPDATES: 22 AUG 2005 HIGHEST RN 861291-85-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

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*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005. A new display format, IDERL, is now    *
* available and contains the CA role and document type information. *
*
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Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

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L54 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN

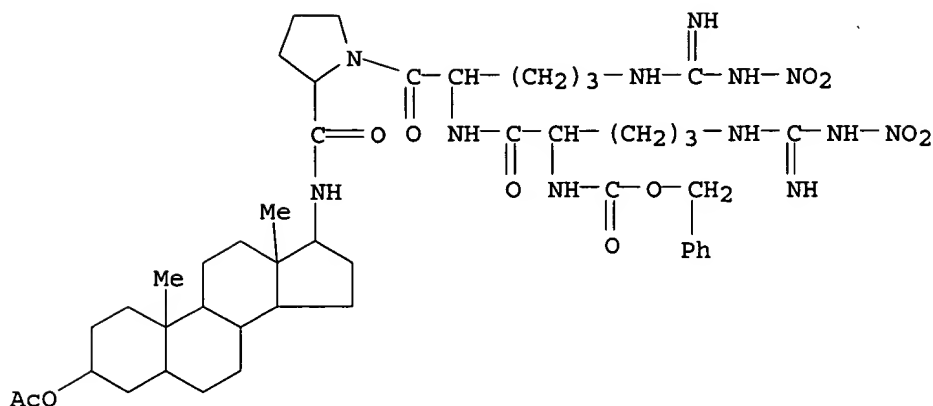
RN 13794-77-9 REGISTRY

ED Entered STN: 16 Nov 1984

CN 2-Pyrrolidinecarboxamide, 1-(N2-L-arginyl-L-arginyl)-N-(3β-hydroxy-5α-androstan-17β-yl)-, acetate (ester), triacetate, L- (8CI)  
 (CA INDEX NAME)

OTHER CA INDEX NAMES:

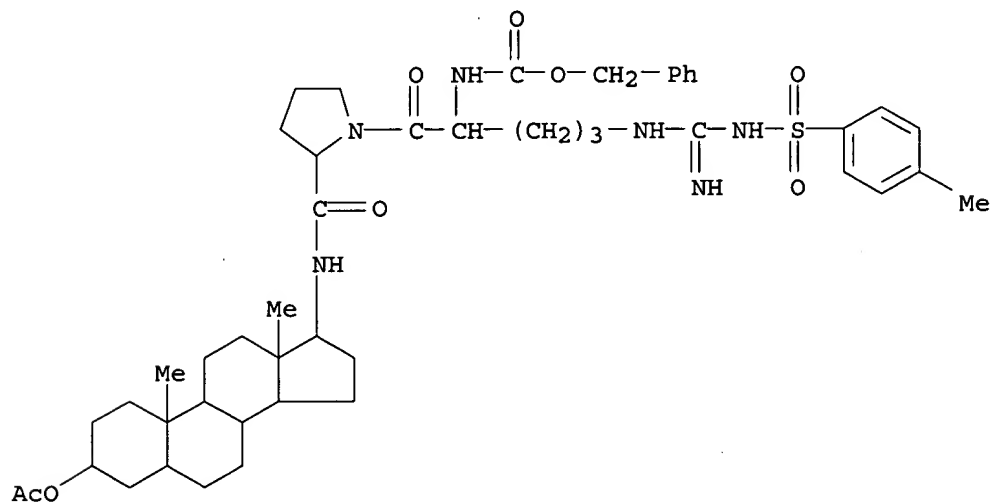




1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 66:76285

L54 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN  
RN 13650-37-8 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN Carbamic acid, [1-[[2-[(3β-hydroxy-5α-androstan-17β-yl)carbonyl]-1-pyrrolidinyl]carbonyl]-4-[3-(p-tolylsulfonyl)guanidino]butyl]-, benzyl ester, acetate (ester) (8CI) (CA INDEX NAME)  
MF C47 H66 N6 O8 S  
LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 66:95380

L54 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN

RN 10463-60-2 REGISTRY

ED Entered STN: 16 Nov 1984

CN L-Prolinamide, N5-[imino(nitroamino)methyl]-L-ornithyl-N-  
[(3 $\beta$ ,5 $\alpha$ ,17 $\beta$ )-3-(acetyloxy)androstan-17-yl]-,  
monohydrochloride (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

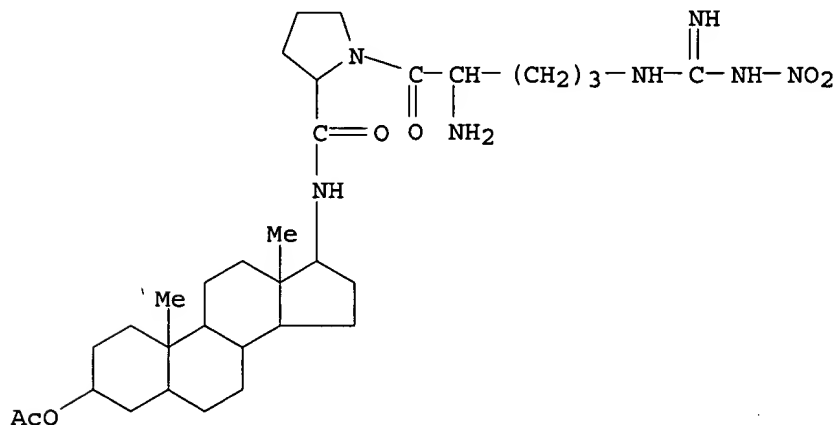
CN 2-Pyrrolidinecarboxamide, N-(3 $\beta$ -hydroxy-5 $\alpha$ -androstan-17 $\beta$ -  
yl)-1-[N5-(nitroamidino)-L-ornithyl]-, acetate (ester), monohydrochloride,  
L- (8CI)

CN Androstane, L-prolinamide deriv.

MF C32 H53 N7 O6 . Cl H

LC STN Files: CA, CAPLUS

CRN (10463-89-5)



● HCl

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 66:76285

L54 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN

RN 10463-58-8 REGISTRY

ED Entered STN: 16 Nov 1984

CN 1-Pyrrolidinecarboxylic acid, 2-[[[(3 $\beta$ ,5 $\alpha$ ,17 $\beta$ )-3-(  
(acetyloxy)androstan-17-yl)amino]carbonyl]-, phenylmethyl ester, (S)-  
(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1-Pyrrolidinecarboxylic acid, 2-[(3 $\beta$ -hydroxy-5 $\alpha$ -androstan-  
17 $\beta$ -yl)carbonyl]-, benzyl ester, acetate (ester), L- (8CI)

CN 5 $\alpha$ -Androstan-3 $\beta$ -ol, 17 $\beta$ -(1-carboxy-L-2-  
pyrrolidinecarboxamido)-, benzyl ester, acetate (ester)

CN Androstane, 1-pyrrolidinecarboxylic acid deriv.

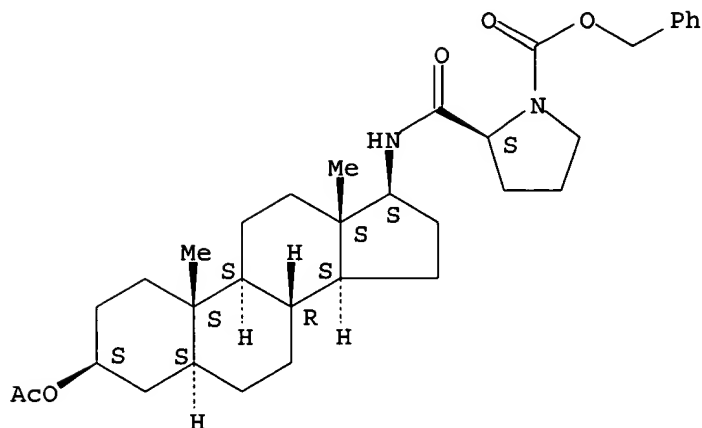
FS STEREOSEARCH

MF C34 H48 N2 O5

LC STN Files: BEILSTEIN\*, CA, CAPLUS

(\*File contains numerically searchable property data)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 66:76285

L54 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2005 ACS on STN

RN 10463-56-6 REGISTRY

ED Entered STN: 16 Nov 1984

CN L-Prolinamide, L-arginyl-L-arginyl-N-[(3β,5α,17β)-3-(acetyloxy)androstan-17-yl]- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2-Pyrrolidinecarboxamide, 1-(N2-L-arginyl-L-arginyl)-N-(3β-hydroxy-5α-androstan-17β-yl)-, acetate (ester), L- (8CI)

CN 5α-Androstan-3β-ol, 17β-[1-(N2-L-arginyl-L-arginyl)-L-2-pyrrolidinecarboxamido]-, acetate (ester)

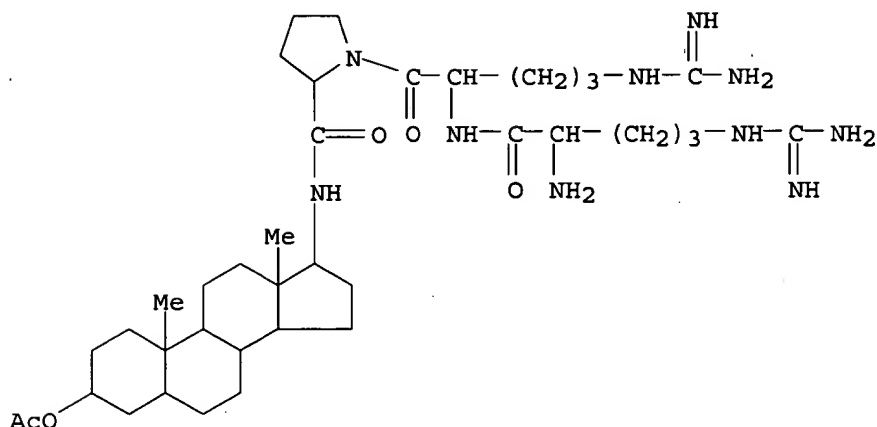
CN Androstane, L-prolinamide deriv.

MF C38 H66 N10 O5

CI COM

LC STN Files: CA, CAPLUS





\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 66:76285

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(FILE 'REGISTRY' ENTERED AT 08:17:31 ON 24 AUG 2005)

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L55 0 S L54

FILE 'HCAPLUS' ENTERED AT 08:19:08 ON 24 AUG 2005  
L56 2 S L54  
L57 2 S L56 AND L1-L5

FILE 'USPATFULL' ENTERED AT 08:19:28 ON 24 AUG 2005  
L58 0 S L54

FILE 'REGISTRY' ENTERED AT 08:19:42 ON 24 AUG 2005

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 08:19:57 ON 24 AUG 2005  
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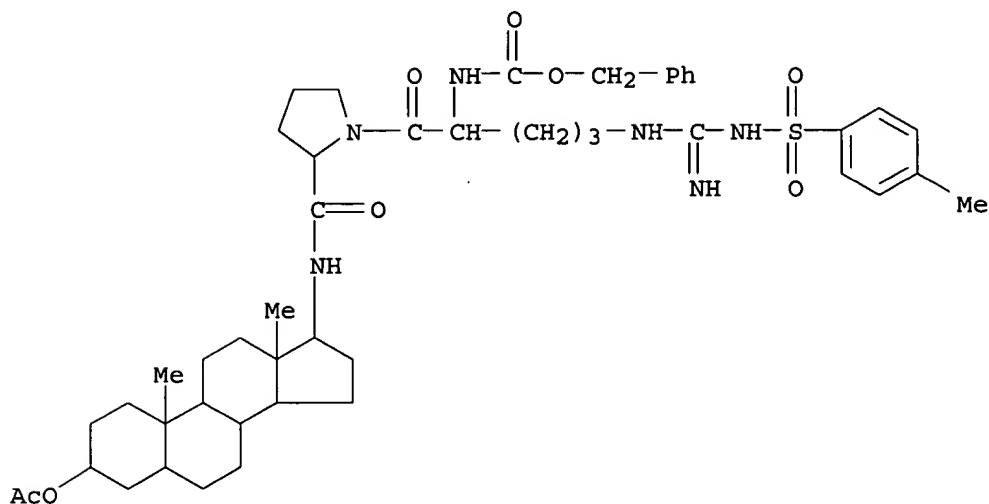
FILE COVERS 1907 - 24 Aug 2005 VOL 143 ISS 9  
FILE LAST UPDATED: 23 Aug 2005 (20050823/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l57 all hitstr tot

L57 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 1967:95380 HCAPLUS  
DN 66:95380  
ED Entered STN: 12 May 1984  
TI Steroids and related natural products. XXXVII. Structural biochemistry.  
5. Diarginyl steroidal peptides  
AU Pettit, George R.; Das Gupta, Arun K.  
CS Univ. of Maine, Orono, ME, USA  
SO Canadian Journal of Chemistry (1967), 45(5), 567-70  
CODEN: CJCHAG; ISSN: 0008-4042  
DT Journal  
LA English  
CC 34 (Synthesis of Amino Acids, Peptides, and Proteins)  
GI For diagram(s), see printed CA Issue.  
AB cf. preceding abstract 5 $\alpha$ -Androstanes (I) and 3 $\beta$ -hydroxyandrost-  
5-enes (II), where X is OH or OAc and Y is a N-(polypeptide residue)amino  
group, are prepared  
IT Steroids, preparation  
RL: PREP (Preparation)  
(peptide derivs.)  
IT Peptides, preparation  
RL: PREP (Preparation)  
(steroidal)  
IT 74-79-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(peptides containing, steroidal)  
IT 3249-05-6P 3249-07-8P 13650-29-8P 13650-30-1P 13650-32-3P  
13650-33-4P 13650-34-5P 13650-36-7P 13650-37-8P  
13650-38-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
IT 13650-37-8P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 13650-37-8 HCAPLUS  
CN Carbamic acid, [1-[[2-[(3 $\beta$ -hydroxy-5 $\alpha$ -androstan-17 $\beta$ -  
yl)carbamoyl]-1-pyrrolidinyl]carbonyl]-4-[3-(p-  
tolylsulfonyl)guanidino]butyl]-, benzyl ester, acetate (ester) (8CI) (CA  
INDEX NAME)



L57 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1967:76285 HCAPLUS  
 DN 66:76285  
 ED Entered STN: 12 May 1984  
 TI Synthesis of 3 $\beta$ -acetoxy-17 $\beta$ -(L-arginyl-L-arginyl-L-prolyl)  
 amino-5  $\alpha$ -androstande  
 AU Pettit, George R.; Smith, Robert Lawrence; Klinger, J.  
 CS Univ. of Maine, Orono, ME, USA  
 SO Journal of Medicinal Chemistry (1967), 10(2), 145-8  
 CODEN: JMCMAR; ISSN: 0022-2623  
 DT Journal  
 LA English  
 CC 34 (Synthesis of Amino Acids, Peptides, and Proteins)  
 GI For diagram(s), see printed CA Issue.  
 AB A steroidal peptide based on the 17-19 unit sequence of  
 $\beta$ -corticotropin was synthesized. Construction of the title substance  
 (I) was achieved starting from 3 $\beta$ -hydroxy-17 $\beta$ -amino-5 $\alpha$ -  
 androstande. The phenylisoxazolium method was used for peptide bond  
 formation and a combination of acetyl (for the steroid nucleus),  
 carbobenzoxy, and nitro (for arginine) protecting groups were employed. I  
 was characterized as the triacetate derivative and the assigned structure  
 received addnl. support from results of an amino acid analysis.  
 ST CORTICOTROPINS STERIOD PEPTIDES HORMONES; TRIPEPTIDES ANDROSTANES; STERIOD  
 PEPTIDES HORMONES CORTICOTROPINS; HORMONES CORTICOTROPINS STERIOD  
 PEPTIDES; ANDROSTANES TRIPEPTIDES; PEPTIDES STERIOD HORMONES  
 CORTICOTROPINS  
 IT 5 $\alpha$ -Androstan-3 $\beta$ -ol, 17 $\beta$ -[1-[N2-[N2-carboxy-N5-  
 (nitroamidino)-L-ornithyl]-N5-(nitroamidino)-L-ornithyl]-2-  
 pyrrolidinecarboxamido, benzyl ester, acetate (ester)  
 Prolinamide, N $\alpha$ -carboxy-NG-nitro-L-arginyl-NG-nitro-L-arginyl-N-  
 (3 $\beta$ -hydroxy-5 $\alpha$ -androstan-17 $\beta$ -yl)-, benzyl ester,  
 acetate (ester), L-  
 Prolinamide, N $\alpha$ -carboxy-NG-nitro-L-arginyl-NG-nitro-L-arginyl-N-  
 (3 $\beta$ -hydroxy-5 $\alpha$ -androstan-17 $\beta$ -yl)-, benzyl ester,  
 acetate ester, L-  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT 2149-70-4P 2304-98-5P 10463-56-6P 10463-58-8P

10463-59-9P 10463-60-2P 13574-67-9P 13574-69-1P

13574-72-6P 13794-76-8P 13794-77-9P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

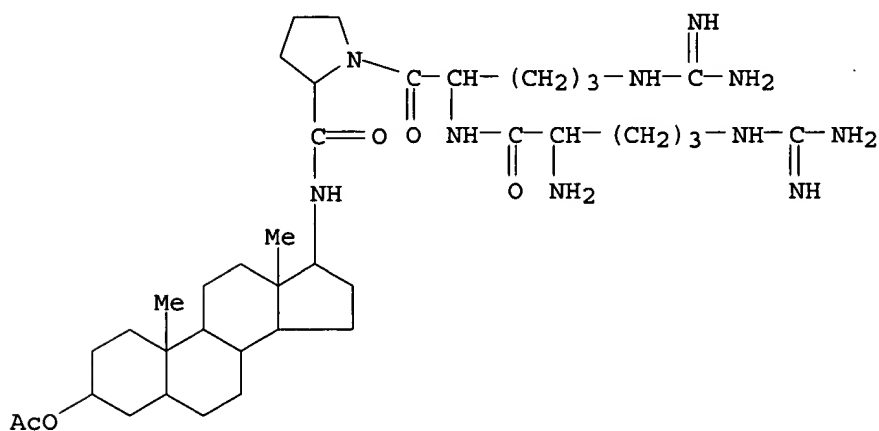
IT 10463-56-6P 10463-58-8P 10463-60-2P

13794-76-8P 13794-77-9P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 10463-56-6 HCAPLUS

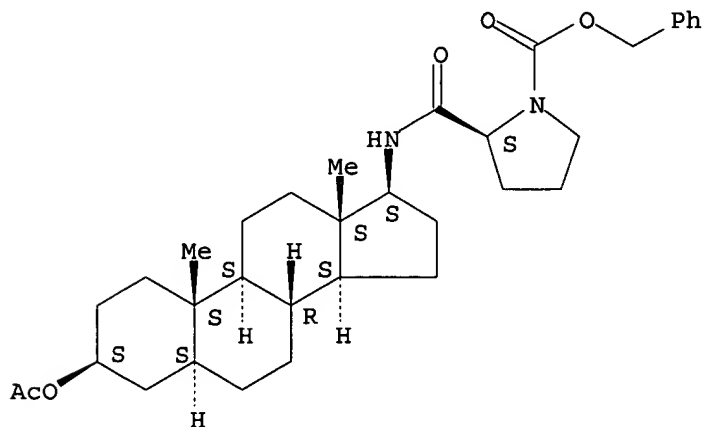
CN L-Prolinamide, L-arginyl-L-arginyl-N-[(3 $\beta$ ,5 $\alpha$ ,17 $\beta$ )-3-(acetyloxy)androstan-17-yl]- (9CI) (CA INDEX NAME)



RN 10463-58-8 HCAPLUS

CN 1-Pyrrolidinecarboxylic acid, 2-[[[(3 $\beta$ ,5 $\alpha$ ,17 $\beta$ )-3-(acetyloxy)androstan-17-yl]amino]carbonyl]-, phenylmethyl ester, (S)-(9CI) (CA INDEX NAME)

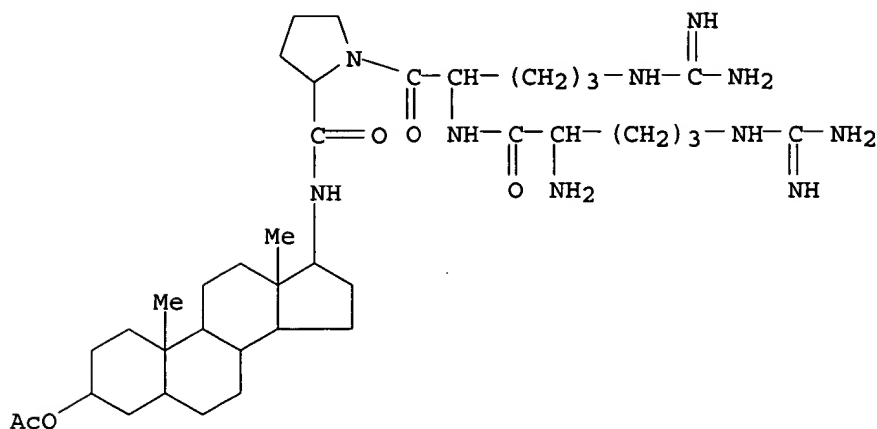
Absolute stereochemistry.



RN 10463-60-2 HCAPLUS

CN L-Prolinamide, N5-[imino(nitroamino)methyl]-L-ornithyl-N-  
[(3 $\beta$ ,5 $\alpha$ ,17 $\beta$ )-3-(acetyloxy)androstan-17-yl]-,  
monohydrochloride (9CI) (CA INDEX NAME)

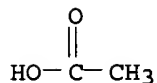




CM 2

CRN 64-19-7

CMF C2 H4 O2



=&gt; =&gt; fil reg

FILE 'REGISTRY' ENTERED AT 08:30:34 ON 24 AUG 2005

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STRUCTURE FILE UPDATES: 22 AUG 2005 HIGHEST RN 861291-85-2

DICTIONARY FILE UPDATES: 22 AUG 2005 HIGHEST RN 861291-85-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

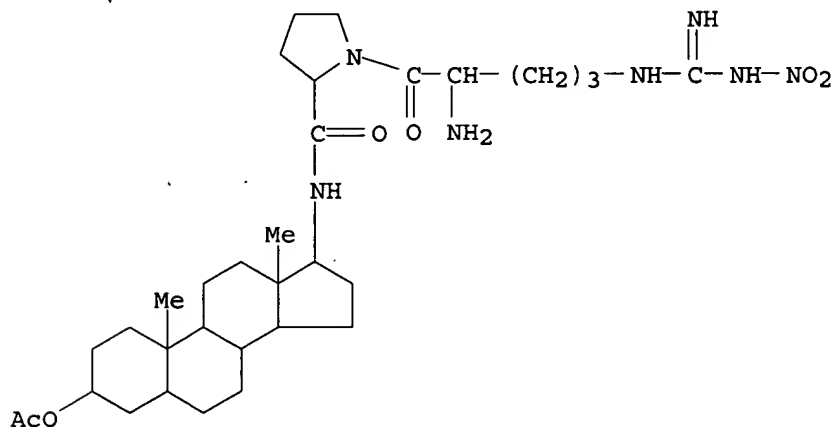
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* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005. A new display format, IDERL, is now    *
* available and contains the CA role and document type information. *
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Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

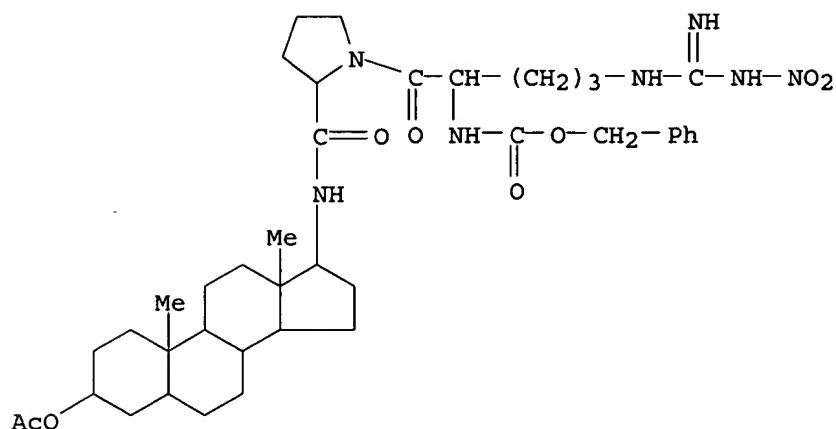
=> d l68 ide can tot

L68 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 10463-89-5 REGISTRY  
 ED Entered STN: 16 Nov 1984  
 CN L-Prolinamide, N-[(3 $\beta$ ,5 $\alpha$ ,17 $\beta$ )-3-(acetyloxy)androstan-17-yl]-1-[N5-[imino(nitroamino)methyl]-L-ornithyl]- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Androstane, L-prolinamide deriv.  
 MF C32 H53 N7 O6  
 CI COM



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L68 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN  
 RN 10463-59-9 REGISTRY  
 ED Entered STN: 16 Nov 1984  
 CN L-Prolinamide, N5-[imino(nitroamino)methyl]-N2-[(phenylmethoxy)carbonyl]-L-ornithyl-N-[(3 $\beta$ ,5 $\alpha$ ,17 $\beta$ )-3-(acetyloxy)androstan-17-yl]- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 5 $\alpha$ -Androstan-3 $\beta$ -ol, 17 $\beta$ -[1-[N2-carboxy-N5-(nitroamidino)-L-ornithyl]-L-2-pyrrolidinecarboxamido]-, benzyl ester, acetate (ester)  
 CN Androstane, L-prolinamide deriv.  
 CN Carbamic acid, [1-[[2-[(3 $\beta$ -hydroxy-5 $\alpha$ -androstan-17 $\beta$ -yl)carbonyl]-1-pyrrolidinyl]carbonyl]-4-(3-nitroguanidino)butyl]-, benzyl ester, acetate (ester) (8CI)  
 MF C40 H59 N7 O8  
 LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 66:76285

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 08:30:39 ON 24 AUG 2005

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FILE COVERS 1907 - 24 Aug 2005 VOL 143 ISS 9

FILE LAST UPDATED: 23 Aug 2005 (20050823/ED)

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=> d all hitstr 171

L71 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1967:76285 HCAPLUS

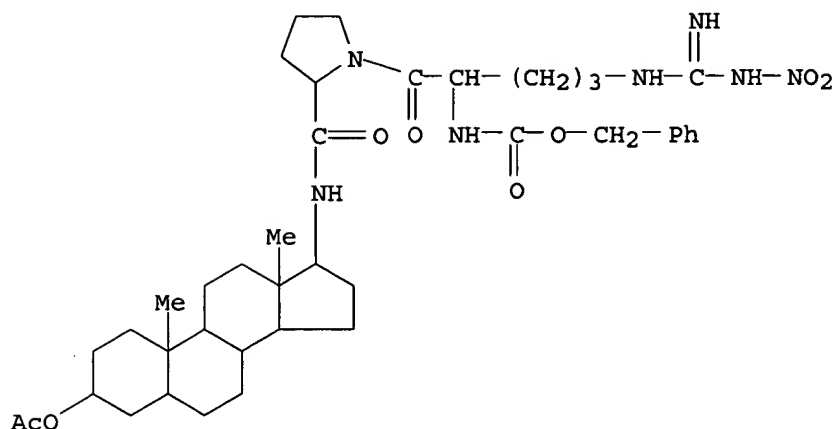
DN 66:76285

ED Entered STN: 12 May 1984

TI Synthesis of 3β-acetoxy-17β-(L-arginyl-L-arginyl-L-prolyl)amino-5α-androstane



AU **Pettit, George R.; Smith, Robert Lawrence; Klinger, J.**  
 CS Univ. of Maine, Orono, ME, USA  
 SO Journal of Medicinal Chemistry (1967), 10(2), 145-8  
 CODEN: JMCMAR; ISSN: 0022-2623  
 DT Journal  
 LA English  
 CC 34 (Synthesis of Amino Acids, Peptides, and Proteins)  
 GI For diagram(s), see printed CA Issue.  
 AB A steroidal peptide based on the 17-19 unit sequence of  
 $\beta$ -corticotropin was synthesized. Construction of the title substance  
 (I) was achieved starting from 3 $\beta$ -hydroxy-17 $\beta$ -amino-5 $\alpha$ -  
 androstane. The phenylisoxazolium method was used for peptide bond  
 formation and a combination of acetyl (for the steroid nucleus),  
 carbobenzoxy, and nitro (for arginine) protecting groups were employed. I  
 was characterized as the triacetate derivative and the assigned structure  
 received addnl. support from results of an amino acid analysis.  
 ST CORTICOTROPINS STEROID PEPTIDES HORMONES; TRIPEPTIDES ANDROSTANES; STEROID  
 PEPTIDES HORMONES CORTICOTROPINS; HORMONES CORTICOTROPINS STEROID  
 PEPTIDES; ANDROSTANES TRIPEPTIDES; PEPTIDES STEROID HORMONES  
 CORTICOTROPINS  
 IT 5 $\alpha$ -Androstan-3 $\beta$ -ol, 17 $\beta$ -[1-[N2-[N2-carboxy-N5-  
 (nitroamidino)-L-ornithyl]-N5-(nitroamidino)-L-ornithyl]-2-  
 pyrrolidinecarboxamido, benzyl ester, acetate (ester)  
 Prolinamide, N $\alpha$ -carboxy-NG-nitro-L-arginyl-NG-nitro-L-arginyl-N-  
 (3 $\beta$ -hydroxy-5 $\alpha$ -androstan-17 $\beta$ -yl)-, benzyl ester,  
 acetate (ester), L-  
 Prolinamide, N $\alpha$ -carboxy-NG-nitro-L-arginyl-NG-nitro-L-arginyl-N-  
 (3 $\beta$ -hydroxy-5 $\alpha$ -androstan-17 $\beta$ -yl)-, benzyl ester,  
 acetate ester, L-  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT 2149-70-4P 2304-98-5P 10463-56-6P 10463-58-8P **10463-59-9P**  
 10463-60-2P 13574-67-9P 13574-69-1P 13574-72-6P 13794-76-8P  
 13794-77-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT **10463-59-9P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 10463-59-9 HCAPLUS  
 CN L-Prolinamide, N5-[imino(nitroamino)methyl]-N2-[(phenylmethoxy)carbonyl]-L-  
 ornithyl-N-[(3 $\beta$ ,5 $\alpha$ ,17 $\beta$ )-3-(acetyloxy)androstan-17-yl]-  
 (9CI) (CA INDEX NAME)



=> => d his

(FILE 'HCAPLUS' ENTERED AT 07:46:04 ON 24 AUG 2005)

DEL HIS  
 L1 1 S US20030216361/PN OR (US2001-893861# OR US2000-214844#)/AP,PRN  
 E PETTIT G/AU  
 L2 73 S E3,E9,E10  
 L3 696 S E14-E16,E21-E24  
 L4 1 S E26  
 L5 162 S E112,E118,E135,E136  
 SEL RN L1

FILE 'REGISTRY' ENTERED AT 07:48:03 ON 24 AUG 2005

L6 5 S E1-E5  
 L7 1 S L6 AND C5-C6-C6-C6/ES AND N/ELS  
 E C26H42N2O3/MF  
 L8 1 S E3 AND C5-C6-C6-C6/ES AND NC4/ES  
 L9 1 S 13574-69-1/CRN  
 L10 2 S L7-L9  
 E 4432.3/RID  
 L11 83023 S E4  
 L12 29539 S L11 AND N/ELS  
 L13 STR  
 L14 30 S L13 CSS  
 L15 758 S L13 CSS FUL  
 SAV L15 KANTAM893/A  
 L16 STR L13  
 L17 0 S L16 CSS SAM SUB=L15  
 L18 0 S L15 AND SQL/FA  
 L19 STR L16  
 L20 2 S L19 CSS SAM SUB=L15  
 L21 93 S L19 CSS FUL SUB=L15  
 SAV L21 KANTAM893A/A  
 L22 7 S L21 AND C19H33N  
 L23 9 S L10,L22  
 SAV L23 KANTAM893B/A

FILE 'HCAOLD' ENTERED AT 08:03:20 ON 24 AUG 2005

L24 2 S L23  
 SEL AN

EDIT /AN /OREF

FILE 'HCAPLUS' ENTERED AT 08:04:21 ON 24 AUG 2005

L25 4 S E1-E2  
L26 2 S L25 NOT (METHYLESTRADIOL OR ERGOSTEROL)/TI  
L27 13 S L23  
L28 2 S L26 AND L27  
L29 11 S L27 NOT L28  
L30 3 S L29 AND L1-L5  
L31 12 S L27 AND (PD<=20000628 OR PRD<=20000628 OR AD<=20000628)  
L32 11 S L26-L31 NOT L28  
L33 2 S (3 BETA OR 3BETA OR 3B OR E B) ()ACETOXY() (17BETA OR 17B OR 17  
L34 11 S L32,L33

FILE 'USPATFULL' ENTERED AT 08:08:28 ON 24 AUG 2005

L35 9 S L23

FILE 'REGISTRY' ENTERED AT 08:08:57 ON 24 AUG 2005

FILE 'HCAOLD' ENTERED AT 08:09:14 ON 24 AUG 2005

FILE 'HCAPLUS' ENTERED AT 08:09:29 ON 24 AUG 2005

FILE 'USPATFULL' ENTERED AT 08:10:46 ON 24 AUG 2005

FILE 'HCAPLUS' ENTERED AT 08:11:17 ON 24 AUG 2005

L36 5 S L15 AND L2-L5  
SEL RN

FILE 'REGISTRY' ENTERED AT 08:11:55 ON 24 AUG 2005

L37 36 S E3-E38  
L38 20 S L37 AND L15  
L39 18 S L38 NOT L23  
L40 7 S L39 AND (C32H53N7O6 OR C38H66N10O5 OR C34H48N2O5 OR C47H66N6O  
L41 16 S L37 NOT L38

FILE 'HCAOLD' ENTERED AT 08:15:33 ON 24 AUG 2005

L42 1 S L40  
SEL AN  
EDIT /AN /OREF

FILE 'HCAPLUS' ENTERED AT 08:15:50 ON 24 AUG 2005

L43 2 S E39  
L44 1 S L43 NOT HALPERN?/AU  
L45 3 S L40  
L46 2 S L45 AND L1-L5  
L47 4 S L44-L46  
L48 3 S L47 NOT L44  
L49 3 S L44-L48 AND PETTIT ?/AU  
L50 2 S L45 AND L49  
L51 3 S L45,L50  
L52 1 S L49 NOT L51

FILE 'USPATFULL' ENTERED AT 08:17:23 ON 24 AUG 2005

L53 0 S L40

FILE 'REGISTRY' ENTERED AT 08:17:31 ON 24 AUG 2005

FILE 'HCAOLD' ENTERED AT 08:17:40 ON 24 AUG 2005

FILE 'REGISTRY' ENTERED AT 08:18:36 ON 24 AUG 2005  
 L54 6 S L40 NOT C53H75N9O9S2

FILE 'HCAOLD' ENTERED AT 08:19:05 ON 24 AUG 2005  
 L55 0 S L54

FILE 'HCAPLUS' ENTERED AT 08:19:08 ON 24 AUG 2005  
 L56 2 S L54  
 L57 2 S L56 AND L1-L5

FILE 'USPATFULL' ENTERED AT 08:19:28 ON 24 AUG 2005  
 L58 0 S L54

FILE 'REGISTRY' ENTERED AT 08:19:42 ON 24 AUG 2005

FILE 'HCAPLUS' ENTERED AT 08:19:57 ON 24 AUG 2005

FILE 'REGISTRY' ENTERED AT 08:20:10 ON 24 AUG 2005  
 L59 STR L19  
 L60 0 S L59 CSS SAM SUB=L15  
 L61 59 S L59 CSS FUL SUB=L15  
 SAV L61 KANTAM893C/A  
 L62 0 S L61 NOT L21,L54  
 L63 STR  
 L64 1 S L63 SAM SUB=L15  
 L65 49 S L63 FUL SUB=L15  
 SAV L65 KANTAM893D/A  
 L66 42 S L65 NOT L21,L54,L61  
 L67 4 S L66 AND (C26H42N2O3 OR C40H59N7O8 OR C32H53N7O6)  
 L68 2 S L67 NOT L23,L54

FILE 'HCAOLD' ENTERED AT 08:29:43 ON 24 AUG 2005  
 L69 0 S L68

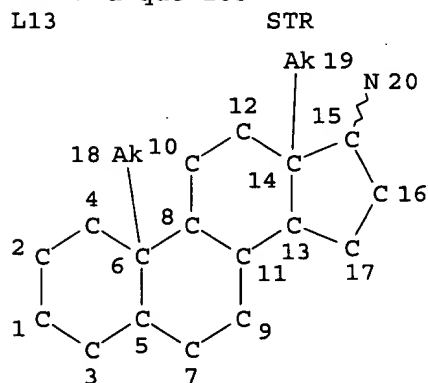
FILE 'HCAPLUS' ENTERED AT 08:29:47 ON 24 AUG 2005  
 L70 1 S L68  
 L71 1 S L70 AND L1-L5

FILE 'USPATFULL' ENTERED AT 08:30:11 ON 24 AUG 2005  
 L72 0 S L68

FILE 'REGISTRY' ENTERED AT 08:30:34 ON 24 AUG 2005

FILE 'HCAPLUS' ENTERED AT 08:30:39 ON 24 AUG 2005

=> => d que l65



## NODE ATTRIBUTES:

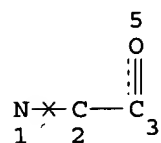
CONNECT IS M1 RC AT 1  
CONNECT IS M1 RC AT 20  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RSPEC 1  
NUMBER OF NODES IS 20

## STEREO ATTRIBUTES: NONE

L15 758 SEA FILE=REGISTRY CSS FUL L13  
L63 STR



## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 4

## STEREO ATTRIBUTES: NONE

L65 49 SEA FILE=REGISTRY SUB=L15 SSS FUL L63

=>